Massachusetts Department of Environmental Protection

Source Registration

INSTRUCTIONS

Detailed instructions for the on-line Source Registration forms

19 Mar 2011

Massachusetts Department of Environmental Protection
One Winter Street
Boston, MA 02108-4746

Produced by Bureau of Waste Prevention

This information is available in alternate format by calling our ADA Coordinator at 617-574-6872.

NOTICE: check the Source Registration web page for additional guidance and reference material

NOTICE

From time to time MassDEP will publish SR Updates that clarify, add to, or amend these Instructions. The Updates are part of these instructions. You can find these Updates published at:
http://www.mass.gov/dep/service/compliance/srupdates.htm

REVISION HISTORY

Clarification to AP1/2/4 form applicability	**18 Apr 2007**
Update to address User comments and concerns	**16 Jan 2008**
Clarification to Stack dimensions	**30 July 2008**
Correction to GHG reporting	**8 May 2009**
Corrections to cover and combined units	**19 Mar 2011**

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Source Registration Program Overview

PURPOSE

Source Registration serves as a mechanism to report actual emissions, potential emissions, and restricted emissions which are utilized to estimate fees that are used to offset MassDEP's costs for monitoring, inspection, technical assistance, and other compliance and enforcement activities and payment of these fees is required to maintain valid permits. In addition, the program is utilized to report daily emissions during the Peak Ozone Season, which occurs from May 1 to September 30.

WHO MUST FILE THIS FORM?

Source Registration is required of any person owning, operating or controlling a facility that meets the requirements listed in 310 CMR 7.12(1)(a).

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

One Source Registration package is required for the entire facility. The Source Registration report must include information on all emission units, emission processed, tanks, and emission points (stacks) unless specifically exempted.

WHAT IF MY FACILITIES CLASSIFICATION CHANGED, DO I STILL REPORT?

If your facility met the annual filing criteria during any portion of the Year of Record, then it must report for that Year of Record. This applies even if the facility ceased to operate at some point during the Year of Record. If the facility can demonstrate that is was NOT subject to Source Registration during the Year of Record (e.g., the facility shutdown in the year prior to the Year of Record) then the facility usually does not have to file. Contact the SR Help Desk or your MassDEP Regional Data Manager if you believe this applies to your facility.

DO I HAVE TO REPORT IF I DID NOT RECEIVE A LETTER FROM MassDEP?

If your facility meets the criteria for filing Source Registration, you must report regardless of whether you received a letter from MassDEP or not. However, you may want to check the mailing list on the SR webpage to see if you have been deferred to a later year. If you think there is a mistake in the list, please contact the SR Help Desk or email air.quality@state.mas.us with an explanation.

***NOTE**: you may be directed by MassDEP to submit a Source Registration through communications other than the annual notice letters. For example, you may be directed to submit as part of an inspection, enforcement action, or permit. You must submit when so directed regardless of whether or not you receive one of the annual Source Registration notice letters.*

WHY CAN'T I LOGIN USING MY FACILITIES TIN?

Sometimes the Tax Identification Number (TIN) we have on file is not correct – this is particularly common for facilities that have not yet filed in the new on-line system. In such cases, we have assigned a temporary TIN – this temporary TIN was included in the SR Notice letter mailed to the facility. Once you login with the temporary TIN, you must correct the TIN on the SR form.

WHAT IF eDEP FORMS FAIL TO OPEN OR DO NOT VALIDATE?

Disclaimer: Information below is based on MassDEP's experience, which may or may not apply to your computer setup. You are responsible for maintenance of your own system – MassDEP can take NO responsibility for how you use the information below or any consequences of your actions to maintain or upgrade your system.

The most common reason that the forms fail to open (i.e., you try to open a form and get a white screen instead of your form) is that an older version of Adobe reader is still installed on the user's computer.

This is also the most common reason for validation errors (such as a validation error stating that an optional or non-editable field is required – which is never true, or that a password is required – which is also never true).

You should install the latest version of Adobe reader to ensure proper functioning of the forms – version 7.07 and greater will work. **FIRST**, however, you should uninstall any older versions.

How do you uninstall old versions of Adobe and install new ones? One of the most frequent problems among SR form users is that Adobe frequently fails to remove all parts of older versions, and these remnants cause the forms to fail. You will recognize this by the fact that directories for Acrobat 5 or Acrobat 6 remain in the Adobe subdirectory of your C:\Program Files directory. We have found it necessary to manually delete the directories for older versions of Adobe Reader from the C:\Program Files\Adobe\ directory. This was particularly common with Adobe Reader 6 and 5. Deleting these directories AFTER running Windows uninstall from the control panel and BEFORE installing any new version of Adobe usually allowed the forms to load and validate properly.

WHAT DO YOU ENTER INTO THE BASIS FIELDS FOR RESTRICTIONS IF YOU DON'T HAVE A PERMIT?

If a unit has a restriction that is based on a regulatory limit rather than a permit condition, then enter the regulatory citation (e.g., 310 CMR 7.X(XX) or 40 CFR Part 63, Subpart XX.XX). All emissions or throughput restrictions will have a basis.

WHAT UNITS MUST BE SUBMITTED?

A complete Source Registration package includes a report on ALL emission units, including idle units. Failing to report on an idle unit for two (2) years could trigger requirements of a new approval plan. Similarly, you must submit a timely Source Registration if an entire facility is idle.

If a unit has been permanently removed and not previously reported as being removed but is listed on the Source Overview Form as part of the facility, then that form must be completed and a decommissioning date entered. This notifies the Source Registration Program that the unit has been permanently removed. In some cases, such as when the removed unit affects a permit or approval plan, etc, affects fees, or other reporting requirements, it maybe necessary to notify your regional office that the unit has been removed.

DO I NEED TO REPORT SMALL PORTABLE HEATING UNITS OR OTHER SMALL SOURCES?

No, small portable heating units, defined as those which have fuel tanks less than 10 gallons capacity, do not need to be reported on Source Registration. Similarly, other small units, or insignificant activities and their associated emissions do not need to be reported, such as bathroom and locker room ventilation, copying activities for internal office use, facility/building maintenance (including repainting, sandblasting, lawn maintenance, etc.). A complete list of these activities can be found in Appendix A: Definitions.

DO I REPORT TEMPORARY EMISSION UNITS?

Yes, in some cases. If an emission unit is a type that would be reported if it were a fixed or permanent unit, but it is a temporary or mobile unit (such as a temporary emergency generator or a temporary boiler mounted on a trailer), then it must be included in your Source Registration ***IF*** *it operated for 120 days or more during the Year of Record*. Note that if the temporary unit is very similar to other units at the facility, you should consider reporting it with one of the existing units on that unit's form (they would become a combined unit).

The only exception is a unit used for construction equipment – that is, a generator used only to power construction equipment does not need to be reported in Source Registration. Note, however, that a temporary generator used to replace or augment an existing unit at the facility (that is, it is used to power the facility's equipment) during construction would need to be reported.

WILL CHANGES REPORTED VIA SOURCE REGISTRATION RESULT IN MassDEP CHANGING MY CLASSIFICATION FOR FEE PURPOSES?

No. If you have made – or will make – changes to your facility that you think will change your fee classification or permit status then you must also contact your MassDEP regional office to confirm any changes that could impact your permits or Annual Compliance Fee. Decommissioning emission units does not automatically result in a change to your facility's classification.

WILL MassDEP REVIEW WHAT I HAVE SUBMITTED?

Yes. We have automated Quality Assurance programs that search all of the submittals for missing, unusual or inconsistent data. In addition, MassDEP staff will also review individual packages in more detail from time to time.

If a problem is found, the owner/operator of the facility or the preparer may be contacted regarding mistakes or questionable data. Please check your work to avoid you or your client receiving a call from us. If you are reporting anything unusual (such as a reorganization of your emission units), it is good to explain this in the notes.

Note: You must be able to access your Source Registration during an inspection of the facility by MassDEP.

BWP AQ Source Registration Overview Form

PURPOSE	This form is utilized by users to create or amend a Source Registration Package.
WHO MUST FILE THIS FORM?	This form must be completed by each owner/operator/preparer submitting their Source Registration.
HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?	Submit one form for the whole facility.
NOTE FOR REPEAT FILERS:	Most of the information on this form will have been filled in by eDEP. You may make changes to most fields.

A. CREATE A SOURCE REGISTRATION PACKAGE

1. Select existing or New Facility – check one:

• Existing Facilities	Used by existing facilities to create a Source Registration Package. Provides the preparer the ability to create additional AP-Stack, AP-1, AP-2, AP-3, and/or AP-4 Forms, by means of a check box, for any new units added since the previous submittal. Checking this box will create the "New Unit Creator Form (New APForm Creator)".
• New Facilities	Used by new facilities to create a Source Registration Package. This will automatically create the "New Unit Creator Form (New APForm Creator)" allowing the user to create the appropriate number of forms for the submittal.
Note concerning "New Unit Creator Form (New APForm Creator)"	Once the "New Unit Creator Form (New APForm Creator)" is validated, the appropriate types and number of forms are created. If it becomes necessary to create additional form(s) for overlooked unit(s) at a later time, any individual "new unit" forms (AP-Stack, AP-1, etc.) that have been previously validated will need to be re-validated.

B. AMEND A SOURCE REGISTRATION

Form/Unit to be amended:	It make become necessary to amend a previously submitted package due to a typographical mistake while entering fuel usage (which impacts a specific emission unit and the total emissions summary), a typographical mistake while entering an allowable emissions restriction (which impacts a specific emission unit), a new emission unit was entirely overlooked (which impacts a specific emission unit and the total emissions summary), the facility contact has changed (which impacts the AP-SR form), or one of many other numerous reasons. Note: If it is necessary to amend a previously submitted package, please contact the Source Registration Help Desk by calling or emailing air.quality@state.ma.us before you open a new package. This ensures that your initial submittal wrote correctly to the database and that the data pre-fills correctly and total emissions are calculated correctly.
• AP-SR	Checking this box enables the facility mailing information, facility contact information, etc. to be amended.
• AP-TES	Checking this box enables the total facility emissions to be updated/validated.
• New Unit Creator Form (New APForm Creator)	Checking the box "Check here to add new units" enables the ability to create new forms for added units using the New Unit Creator Form (New APForm Creator).

- Emission Units — Checking a specific emission unit enables information for that unit, such as fuel usage, emission restrictions, SCC, etc, to be amended. Specific changes may require the AP-TES form to be amended and validates.

You have completed the Source Registration Overview form.

Validate the form. This will create the Source Registration Package, or the specific areas that have been requested to be amended and take you to the <Related Forms – Transmittal ID> page where you can begin preparing the Source Registration Submittal,

BWP AQ New Unit Creator Form (New APForm Creator)

PURPOSE

This form is utilized by users to create individual forms (AP-1, AP-2, AP-3, AP-4, and/or AP-Stack) for added emission units or stacks since the last Source Registration submittal.

WHO MUST FILE THIS FORM?

This form must be completed by each owner/operator/preparer submitting their Source Registration for any emission units or stacks added since the last Source Registration submittal.

NOTE TO NEW FACILITIES OR FIRST TIME SUBMITTERS

If you are a new facility, or this is your first Source Registration, you must complete a form for each emission unit and stack.

1. ENTER THE NUMBER OF NEW UNITS AND NEW STACKS TO ADD TO THIS PACKAGE

- AP-1 — Entering a number here will add that number of AP-1 Fuel Utilization Equipment Forms for the number of boilers, engines, furnaces, etc being added to the facility.
- AP-2 — Entering a number here will add that number of AP-2 Process Forms for the number of processes, which include coating and painting operations, being added to the facility.
- AP-3 — Entering a number here will add that number of AP-3 Incinerator Forms for the number incinerators being added to the facility.
- AP-4 — Entering a number here will add that number of AP-4 Organic Material Storage Forms for the number of tanks being added to the facility.
- AP-Stack — Entering a number here will add that number of AP-Stack Forms for the number of new or replacement stacks being added to the facility.

Note concerning "New Unit Creator Form (New APForm Creator)" — Once the "New Unit Creator Form (New APForm Creator)" is validated, the appropriate type and number of forms are created. If it becomes necessary to create additional form(s) for overlooked unit(s) at a later time, any individual "new unit" forms (AP-Stack, AP-1, etc.) that have been previously validated will need to be re-validated.

You have completed the New Unit Creator Form (New APForm Creator).

Validate the form. This will create the specified number of each form requested and return you to the <Related Forms – Transmittal ID> page where you can pick the next form to work on.

BWP AQ AP-SR Source Registration Form

PURPOSE	This form provides basic descriptive information about the facility.
WHO MUST FILE THIS FORM?	This form must be completed by each owner/operator/preparer submitting their Source Registration.
HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?	Submit one form for the whole facility.
IN WHAT ORDER SHOULD I COMPLETE THIS PACKAGE?	Complete this form first because it contains information that will populate the other forms in the Source Registration Package. (Note: Although you will be filling in certification statement information at the end of the form, the statement will not be "signed" until the responsible official completes the STEP 2 of the eDEP electronic filing process "Acceptance". That step happens after all of the required forms have been filled in and validated).
NOTE FOR REPEAT FILERS:	Most of the information on this form will have been filled in by eDEP. You may make changes to most fields.

A. FACILITY INFORMATION

How to change locked fields?	Facility Name and street address: You must contact your Regional Facility Maintenance File (FMF) Data Manager to change the facility name and/or address. The list of MassDEP regional offices and the FMF Data manager's phone numbers can be found on the Source Registration Website: http://mass.gov/dep/service/compliance/instru05.htm under Contacts and Help. To access the website open another internet browser window and copy and paste the URL into the address line. The Facility AQ Identifier is a permanent identifying number assigned by MassDEP to a particular location; you may recognize it as the old SSEIS ID. If you believe this number is incorrect (e.g. it is not the facility's SSEIS ID number shown on prior source registrations) contact the Source Registration Data Manager at 617-292- 5609. The MassDEP Account number / FMF Facility # is assigned by MassDEP. It changes with ownership. If you believe the number is wrong (e.g. it is different than the number shown on your bill or permit approvals contact your Regional FMF Data Manager. You cannot change it.
1. Facility	
a. Facility Name	The name must uniquely identify the facility. If the parent corporation operates more than one facility, the corporate name alone is insufficient. Note: you cannot change the facility name: if you need to do so you must contact your Regional MassDEP BWP Data Manager.
How to change facility name?	To change the facility name or address you must contact your Regional MassDEP BWP Data Manager. The list of MassDEP regional offices and the phone numbers of the data managers can be found on the

Source Registration Web page :

http://mass.gov/dep/service/compliance/sr.htm

How do I access the web page?

To access the web page open another internet browser window and copy and paste the URL into the address line.

b-h. Facility Address

Physical address for the facility (not mailing or corporate address, if different)

b. Facility Street Address Line 1 c. Facility Street Address Line 2 d. City/Town e. State	f. Zip Code g. Facility Phone Number h. Facility Fax Number

2. Mailing Address

Name of facility where mail regarding the source registration should be sent.

The address to which you want future registration packages and notifications sent, if different than the street address above.

Facility information rather than corporate/owner information, if they are different:

a-e

Address where mail regarding the source registration should be sent	
a. Facility Mailing Address/PO Box Line 1 b. Facility Mailing Address/PO Box Line 2 c. City/Town	d. State e. Zip Code

3 Facility Type – check one:

- Utility

Utility: Check this box if the facility is an electrical utility facility, regardless of ownership (i.e. private, tribal, federal, state, local government)

- Private

Private: If the facility is an electrical utility facility, do not check this box, check the utility box

- Tribal

Tribal: If the facility is an electrical utility facility, do not check this box, check the utility box

- Federal Government

Federal: If the facility is an electrical utility facility, do not check this box, check the utility box

- State Government

State: If the facility is an electrical utility facility, do not check this box, check the utility box

- Local Government

Local Government: If the facility is an electrical utility facility, do not check this box, check the utility box

4. ORIS Facility Code

This only applies to large electrical utility facilities.

5. ID Numbers

These are assigned by MassDEP and cannot be changed.

a. DEP Account Number

This is the unique Identification Number, assigned by MassDEP, to represent your entire facility in its information management systems.

Facility AQ Identifiers – ID Number

This is the ID number, assigned by MassDEP, to identify your facility in MassDEP's computer system for storing this information.

6. Location (Check the box for the method you are using to show your facilities geographic location:)

a. Universal Transverse Mercator (UTM) or b. Latitude/Longitude (Lat/Long)

c. UTM Horizontal-meters

UTM coordinates for your facility can be found on a local USGS Topographic maps.

- Valid UTM Ranges
- Horizontal: 251000 – 749000
- Vertical: 4566000 - 4749000

d. UTM Vertical – meters
e. UTM Zone

f. Lat: 42.9º – 41.2º

g. Long: 73.5º – 69.8º

CAUTION: Latitude/Longitude coordinates must be within the ranges specified on the form Latitude: 42.9º – 41.2º; Longitude: 73.5º – 69.8º (enter positive values only)

How do you find / verify the latitude/longitude for your facility?

NOTE: You only need to fill out either UTM coordinates OR latitude/longitude. If you submitted UTM coordinates in the past, MassDEP converted them into Latitude/Longitude.

Please see Appendix C: Example Calculations for an explanation of how to find your UTM coordinates on a USGS Topographical Map.

To find coordinates online, go to the MAPS FOR MY COMMUNITY page of the MassDEP website and follow the steps below.

[1] Go to MAPS FOR MY COMMUNITY: http://mass.gov/dep/service/my_comm/mycomm.htm
[2] Select your community and hit go.
[3] Get Wetlands MAP (found in lower part of screen).
[4] Click on Icon to zoom and create a box over the map where the facility is located.
[5] Repeat box creation until the facility is clearly visible.
[6] Click on "xy" icon in lower right of screen and move cross hairs over the front door of the facility
[7] Left click on your mouse and box should appear with the lat and long coordinates.

7. North American Industry classification code(s) NAICs

The six-digit code that an owner/operator uses to classify their facility, by the type(s) of products they produce. It can be found on your facility's Federal IRS forms.

Your facility may be engaged in more than one line of business. You can list up to 4 different codes in the spaces provided.

How to find NAICS codes?

? NAIC help

How do I access the website?

NAICS codes are six digit codes used to classify facilities by the types of products they produce. These are submitted on your Federal IRS forms. Additional information about NAICS codes can be found at the U.S. Census Bureau Website http://www.census.gov/epcd/www/naics.html. To access the website open another internet browser window and copy and paste the URL into the address line.

8. Facility description

What is being produced and how. *e.g. Screen printed tee shirts.*

9. Facility's normal hours of operation

- Start time
- End Time

✓ *Typical* start and end times for the facility.

Continuous – 24x7x52

a. Which days is the facility open?

- S(unday)
- M(onday)
- T(uesday)

Check this box, if the facility typically operates twenty-four hours a day seven days a week. Check the days of the week the facility is *typically* operated.

- W(ednesday)
- T(hursday)
- F(riday)
- S(aturday

10. Number Of Employees

The maximum number of employees that worked at the facility any time during the year of record (calendar year being reported).
Exclude from this count those employees that met both of the following conditions:

- ✓ The employee worked less than 17 hours a week

and

- ✓ The employee worked less than 20 weeks per year.

11. Facility Owner

Name of corporation, partnership, etc. if separate from facility.

Report the facility information as reported on the Tax Identification Number (TIN) Form for your facility. TIN is also referred to as Federal Employee Identification Number (FEIN) or Employee Identification Number (EIN).

Please contact your MassDEP Regional Office if the ownership of this facility has changed.

Who is the owner?

The owner is the individual or entity that is listed on your Federal Employer Tax Identification Number

a. Owner or Corporation Name	g. Country
b. Mailing Address Line 1	h. Owner Phone Number
c. Mailing Address Line 2	i. Extension
d. City/Town	j. Owner Fax Number
e. State	k. Owner E-mail Address
f. Zip Code	l. Owner TIN (Taxpayer Identification Number)

12. Facility contact information

If contact name and/or address was listed previously, check appropriate box and the needed information will be filled in automatically;

Otherwise provide the requested information:

a. Facility Contact First Name and Last Name	g. Country
b. Mailing Address Line 1	h. E-mail Address
c. Mailing Address Line 2	i. Phone Number
d. City/Town	j. Extension
e. State	k. Fax Number
f. Zip Code	

13. Air emissions information contact

The name of the individual who should be contacted for further information about the form(s).

If contact name and/or address was listed previously, check appropriate box and the information you provided will be filled in automatically;

Otherwise provide the requested information:

a. Air Emissions Contact First Name and Last Name	g. Country

b. Mailing Address Line 1	h. E-mail Address
c. Mailing Address Line 2	i. Phone Number
d. City/Town	j. Extension
e. State	k. Fax Number
f. Zip Code	

B. PREPARER

1. Identification information for preparer of this submittal

If contact name or address were the same as one listed previously, check appropriate boxes and the information you provided will be filled in automatically;

Otherwise, supply the requested information:

a. Preparer Contact First Name and Last Name	g. Country
b. Mailing Address Line 1	h. E-mail Address
c. Mailing Address Line 2	i. Phone Number
d. City/Town	j. Extension
e. State	k. Fax Number
f. Zip Code	

C. NOTES AND ATTACHMENTS

1 Notes:

This section is to identify any additional, explanatory material the preparer of the facility/s SR/Emission Statement is choosing to submit

2. Attachments

If the material can be sent electronically, check the box on the appropriate form. You will be prompted in Step 2 (when submitting the forms) for the attachment.

If paper information must be submitted, list the titles of the documents being submitted in the Notes.

D. CERTIFICATION

Note: Although you are providing this information now, the certification statement won't be "signed" until the second step of the eDEP Reporting process: "2. Acceptance" (" 3.Acceptance" if you attach at least one file).

The Responsible Official completes the "Acceptance" step, and by so doing "signs" the certification statement. When that is done, step 3 "Submit" to MassDEP can happen.

If you are not the Responsible Official you must "Share" the completed package with that individual so that they can complete the Acceptance Step. They will have to create a user ID, give you their 'nickname' to allow you to share the package with them.

Signature Of Responsible Official, Signed Under The Pains And Penalties Of Perjury and Date

This Certification statement must be reviewed and signed under the pains and penalties of perjury by a responsible official ⓘ at the location. If an agent has been designated to fill out this form, the responsible official must review the forms and sign the certification statement.

CAUTION: In order to be considered a "responsible official" an individual working at the facility must meet the criteria listed in Appendix A: Definitions or see below.

For electronic filers only: eDEP will insert the signature and date after the form has been submitted electronically.

Who is a responsible official?

*For a *Sole Proprietorship*: The responsible official is the sole proprietor.

*For a *Partnership:* The responsible official is a general partner with the authority to bind the partnership.

*For *a Corporation or a non-profit corporation:* The responsible official is a corporate official with authority to bind the corporation such as a:

1) President,
2) Secretary,
3) Treasurer,
4) Vice president of the corporation in charge of a business function, or
5) Any other person who performs similar policymaking or decision-making functions of the corporation.

*For a *Municipality or other public agency:* The responsible official is any one of the following individuals:

(1) A principal executive officer or
(2) A ranking elected official who is empowered to enter into contracts on.

What if the preparer is not a "responsible official'?

When a preparer is not a Responsible Official, he or she can complete and validate the forms but cannot sign or submit the package. Instead, the preparer **must return** to the <Current Submittals> screen and "**share**" **the completed package with a Responsible Official** who in turn completes the Acceptance phase (signs the package) and submits it to MassDEP.

Note: a "Responsible Official", must register with eDEP before the preparer can share the package.

Responsible official information: Print Name

a. Print First Name
b. Print Last Name
c. Title
d. Phone Number
e. E-mail Address

Note: You have completed the source registration (AP-SR) form.

Validate the form: the system will identify and force you to correct any mistakes before it will "accept" the form and return you to the <Related Forms-Transmittal ID> page where you can pick the next form to work on.

BWP AQ AP-1 Emission Unit – Fuel Utilization Equipment Instructions

PURPOSE

This form describes fuel use, equipment, and emissions at the facility during the calendar year being reported from all combustion processes, except waste incineration and air pollution control equipment "combustion devices", such as flares or afterburners.

WHEN IS THIS FORM APPLICABLE?

Applicability

Use this form for any fuel burning emission units at your facility excluding:

Waste incineration and their auxiliary burners (reported on the AP-3 form)
Process heaters, dryers, ovens (usually reported on AP2), and
Air pollution control equipment (reported on the appropriate AP-1, AP-2 or AP-3 form for the units controlled).

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

Submit one form for each boiler, furnace, internal combustion engine *(e.g., diesels or turbines),* or other combustion unit . You may combine reporting for more than one fuel burning unit on a single AP-1 orm (SEE p31 for further guidance on combined units). You must include any fuel utilization units added or decommissioned since your last source registration.

CAUTION: Once your facility has exceeded any threshold for Source Registration, you must report on ALL sources of combustion at your facility. No combustion sources may be excluded from Source Registration, except those listed as "Insignificant Activities" under 310 CMR 7 Appendix C(5)(i). This includes units that are idle – you must report on all idle combustion units at the facility whenever you submit a Source Registration.

CAUTION: FOR FILERS WITH NEW COMBUSTION EMISSIONS UNITS SINCE THEIR LAST SOURCE REGISTRATION

You must create a new emission's unit form for any new emission unit. If you have not already created the new emissions unit (when first opening your source registration package), you must either:
1) Under <Related Forms>, open the first form labeled <AQ Source Registration Overview>;

- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under <Related Forms>, select <New Unit Form Creator (New APForm Creator)>;
- Choose the appropriate form and enter the number of new units;
- Validate the form;
- Follow subsequent instructions.

----Or----

2) You must create a new eDEP partial AQ Source Registration package for that emission unit. Once you have submitted the package you are working on:

- Return to "Start New";
- Select "AQ Source Registration Package";
- In SR Overview Form: B.1: Amend a Source Registration;
- Select "Check here to add new units";
- Follow subsequent instructions pertaining to the New Unit Form Creator (New APForm Creator).

CAUTION: If you realize in the midst of filling out this package that you need to create additional forms, DO NOT return to the Overview form UNLESS you are willing to revalidate each previously validated form. Revalidation requires that you open and revalidate every form in the package – you don't lose any of the data you have entered, but the process can be time consuming, particularly for a facility with more than 5-10 units.

The best way to add emission units AFTER you have completed much of your package may be by submitting a supplemental package (Option 2 above).

CAUTION: regarding the order in which you complete your forms

If this unit's emissions release point is a new "vertical release point" (stack). You must have created and completed a BWP AQ AP-Stack form for that new stack prior to filling out this form. The drop down-menu (A.13) will not contain the new stack and you will be unable to validate this form and will be forced to save and exit this form. You will have to return to complete it after obtaining the DEP stack number for the replacement stack.

A. EQUIPMENT DESCRIPTION

Note: In general the information requested below will be pre-populated from MassDEP's SSEIS database. However, certain data submitted to MassDEP on paper AP forms was not historically stored in SSEIS. That data will not appear on the electronic forms until it has been submitted in this new format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.
.TIP: If you obtained a plan approval for the emission unit(s) you are reporting on you will have received two documents from MassDEP: 1) a plan approval letter and 2) a copy of the permit application that you submitted to MassDEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

How should Ovens be reported?

How should Dryers be reported?

Ovens and dryers should be reported on one form only. If the oven or dryer has no emissions other than those from fuel combustion (the oven or dryer is used to drive off water and produces water vapor only), then Form AP-1 pertaining to fuel utilization emission units should be used. This will allow the auto calculation feature to be utilized.

If this is not the case and other emissions are present, such as solvents that are baked off, then the oven or dryer should be reported on Form AP-2 for process emission units.

1. Facility Identifiers	The name and identifying numbers of the facility or plant that you are reporting.
a. Facility Name	This will be pre-populated from the information on your BWP AQ SP-SR Form.
b. DEP Account number	**Note:** You cannot change the facility name on this form. To change the facility name you must contact your MassDEP Regional Office FMF Data Manager.
c. Facility AQ Identifier – SSEIS ID	
How does the new emission unit numbering system compare to the Side-by-Side system?	On the old Side-by-Side form, individual "emission units" were called "points". The DEP number (2.c) is the point number from the old forms. Points were assigned to "stacks" whether there existed an actual stack or not. The new system is organized around the emission units (points). A stack is only assigned to a point if it is an actual vertical stack (such stacks keep their old stack number). eDEP allows you to change the name (2.a) and give your own number (2.b) to each emission unit. MassDEP keeps track of the units by the DEP number (2.c), and therefore you cannot change it.
2. Emission unit identifiers	If this is a new Emission Unit: Assign the emission unit a name/number in order to uniquely identify it. If this is an existing Emission Unit: Assign or change the emission unit name/number in order to uniquely identify it.
a. Owner/Operator's choice of emission unit name- edit as needed.	A unique name of your choice that will allow you to recognize this unit on future reports A unique number or code of your choice that will allow you to recognize this unit on future reports. Example: Boiler #1, Emergency Generator #2, Fire Pump #3 etc.
b. Facility's emission unit number / code – edit as needed.	If this is an existing emission unit the information will be pre-populated.
c. DEP emissions unit # - old SSEIS point #	If this is a new Emissions Unit, the field is blank and locked – MassDEP will assign this number. If this is an existing Emissions Unit, the information will be pre-populated for existing emissions units. This is a unique number assigned by MassDEP that allows MassDEP to recognize the unit on future reports.
d. ORIS id # – for large electrical generators only	This information will be populated from the BWP AQ SR form.
e. Combined units- enter number of individual units	Total number of individual units combined on this AP-1.

Enter that same quantity here and on the forms for each other unit to which it applies.

Fuel burning units can be combined as one emission unit and reported on one AP1 or AP2 form. This is to make it easier to report large numbers of small units. The number of units in a combined unit must be entered in the "combined units" field on the AP1/2.

Combustion units may be combined subject to certain restrictions below.

UPDATED

Restrictions on Combined Units Each individual unit within a combined unit must:

1. be of the same general type (not necessarily identical)
2. use the same fuel(s)
3. be subject to the same regulatory restrictions
4. be below the following maximum input thresholds:

   Distillate oil -- 10 MMBtu / hour or 72 gal / hour;
   Residual oil – 10 MMBtu / hour or 64 gal / hour;
   Natural gas – 10 MMBtu / hour or 100 Therms / hour;
   Solid fuel – 3 MMBtu / hour;
   Used oil fuel – 3 MMBtu / hour or 19 gal / hour;
   Landfill gas – 3 MMBtu / hour or 6,000 cf / hour

5. AND the total heat input of all units in the combined unit does not exceed 50 mmbtu/hour.

Note: In the comment section of the form, include the locations of the combined units if they are not in the same building at the facility.

How do you enter data for Combined Units ?

NEW

When entering data for combined units use these guidelines:

- Make/Model No – use the most common make/model or enter "combined".
- Installation Date – enter the install date for the oldest of the individual units.
- Permit Date – enter the most recent permit number and date for the units.
- Max capacity / potential – enter the sum of the maximum capacities of all of the individual units as the maximum capacity for the combined unit.
- Decommission date – do not decommission until the last individual unit is gone; if you need to add or subtract units from the combined unit, then increase or decrease the value in the Combined Units field to reflect the change and explain in the Notes field.
- Explain in the Notes field which units have been combined (list them) and any issues or oddities about the combined unit. Make a note in the Notes field with the locations of the combined units if they are not in the same building at the facility.

3. DEP Air Quality Approvals

Note: Some emission units will not have plan approvals because they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03, they are below the threshold for which a plan approval or permit is required, or they were installed before the effective date of the regulation.

If a plan approval is required: Write the number for the plan approval that allowed the installation of the emission unit. This number is found on the letter sent by MassDEP that informed you that they approved the unit.

What if the emission unit has more than one MassDEP approval?	Cite the most recent plan approval that includes specific requirements applicable to this emission unit. Do not cite an approval that sets a general requirement for the facility as a whole, unless it also establishes specific conditions for this emission unit. Approvals that apply facility-wide are cited on the AP-TES form. Similarly do not cite your most recent Air Operating Permit if you have one unless a more stringent limit is established in the operating permit for the emission unit. Usually the Air Operating Permit is a compilation of requirements included in other plan approvals or applicable regulations. **Note:** A particular plan approval may be cited more than once in the package or on a form. For example, a plan approval that includes specific requirements for more than one emission unit will be cited on the AP form for each emission unit it covers. Similarly if a plan approval specifies conditions for the emission unit and for the monitor, raw material, fuel, and/or air pollution control device it will be cited on each applicable question on the emission unit form.
a. Most recent approval number	Most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") number applicable to this unit, from MassDEP plan approval letter.
b. DEP approval date (mm/dd/yyyy)	Date of most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") applicable to this unit, from MassDEP plan approval letter.
4. Is this unit exempt under CMR 7.02 Exemptions from Plan Approval?	Check the appropriate box.
5. If exempt from Plan Approval, indicate reason why (cite specific MassDEP AQ Regulation)	If Question 4 is yes, then a response is required. If no, then skip to Question 6.
6. Emission unit installation and decommission dates	Provide the requested dates in the appropriate lines. If the unit was installed many years ago and you do not know the exact date use your best approximation.
a. Installation dates – estimate if unknown (mm/dd/yyyy)	
b. Decommission dates – If applicable (mm/dd/yyyy)	Complete only if the unit was shutdown permanently or replaced any time before December 31st of the year of record.
How / when to delete a unit?	Enter a decommission date in 6.b if the unit is being **permanently taken out of service**. If the decommissioned unit operated in the year of record, the emissions from that unit must be included in this Source Registration Package. Therefore units "decommissioned" in this package will remain on the list of emission units for this year of record. They will NOT appear on the NEXT source registration package. **Note:** If you decommissioned a unit prior to the year of record (and are decommissioning it in this package) you must enter zero for the maximum hourly fuel rate, annual fuel usage, actual emissions, and potential emissions. Failing to enter zero for the maximum firing rate on this AP1 will cause the form to calculate non-zero potential emissions, which cause your facility wide PTE to be incorrect on the AP-TES. **Note:** In cases where you have combined units, and took one (or more) out of service DO NOT enter a decommission date. Simply change the number of combined units in the combined units field. Do not decommission the EU unless ALL of the combined units are taken out of service.

7. Emission unit replacement	
a. Is this unit replacing another emission unit?	Check the appropriate box, yes or no. If Yes, then complete 7.b. Otherwise, continue on to Question 8.
b. DEP's emission unit number and facility unit name.	Choose from the drop-down menu. It is populated with the emission units you decommissioned in this and previous submittals.
How to be sure the unit being replaced appears in this menu?	Line A.7.b. " DEP's emission unit number and facility's name for emission unit" is a mandatory field when the "yes" box is checked. However, the unit being replaced **will not appear as a choice** on the drop-down menu **until it is decommissioned**. You will not be able to complete and validate the AP form for a replacement unit until you have first entered a decommission date and completed and validated the AP-1 form for the unit it is replacing. If this unit is replacing another unit that has not been "decommissioned", you must 1) save and exit this form, 2) open the AP-1 form for the unit being replaced, 3) enter the decommission date, 4) complete and validate the form before you can complete this AP-1 Form.
What if one emission unit is replacing more than one unit?	If one new emission unit is replacing several units, pick one of the units being replaced on the drop-down menu and note the others in Section C Notes and Attachments.
8. Additional reporting requirements	Check the appropriate boxes to report on the existence of any reporting requirements other than source registration for this emissions unit and the frequency of that reporting.
a. Are there other reporting air quality reporting requirements for this emission unit?	If yes, specify reporting frequency in 8.b. If no, skip to Question 9.
b. Reporting frequency – check all that apply:	Monthly, Quarterly, Semi-annual, Annual, RES (Include Operating Permit and Plan Approval reports, but not exceedance reporting)

How to report on combined units?

When entering data for combined units use these guidelines:

- Make/Model No – use the most common make/model or enter "combined".
- Installation Date – enter the install date for the oldest of the individual units.
- Permit Date – enter the most recent permit number and date for the units.
- Max capacity / potential – enter the sum of the maximum capacities of all of the individual units as the maximum capacity for the combined unit.
- Decommission date – do not decommission until the last individual unit is gone; if you need to add or subtract units from the combined unit, then increase or decrease the value in the Combined Units field to reflect the change and explain in the Notes field.
- Explain in the Notes field which units have been combined (list them) and any issues or oddities about the combined unit. Make a note in the Notes field with the locations of the combined units if they are not in the same building at the facility.

Note: In the comment section of the form, include the locations of the combined units if they are not in the same building at the facility.

9. Equipment

a. Type

Check the appropriate box for the type of combustion equipment:

Boiler: Any combustion unit including "furnaces" that generate steam or hot water.
Furnace: Do not check "furnace" if the unit also has a boiler.
Engine: Internal combustion engines only.
Other: If "other" enter description: e.g. dryers, kilns, evaporators.

What to do if data unknown or not available?

Do not leave blank: if date or numeric field – estimate; for other fields enter UNKNOWN if unknown.

b. Manufacturer

Firm that built the unit, information can be usually found on metal nameplate on unit.
Do not leave blank: enter unknown if unknown.

Provide the requested information for the combustion unit.

c. Model number

Information can be found on metal nameplate on unit.
Do not leave blank: enter unknown if unknown.

Provide the requested information for the entire combustion unit.

d. Maximum input rating MMBtu/hr

Maximum rated capacity regardless of permit limitations. Information can be found on metal nameplate on unit. Do not leave blank: estimate if unknown.

Tip: The manufacturer's maximum input rating is located on a metal nameplate on the unit. It is usually expressed in Btu per hour or gallons per hour for engines.

e. Number of burners

Provide the requested information for the entire combustion unit.

f. Type of burner	Check the appropriate box. Provide a description if checked “other”. -Rotary -Mechanical atomizer,. - Steam atomizer, - Air atomizer, - Traveling grate, - Hand fired, -Other: If “other” enter “Other” burner type.
g. Burner manufacturer	Provide the requested information for the burners.
h. Burner model number	Do not leave blank: estimate if unknown.
i. Burner installation date (mm/dd/yyyy)	Do not leave blank: estimate if unknown.
10. Hours of operation for the emission unit:	Report on typical operation.
a. Check if typically continuously operated - 24 x 7 x 52	
b. Number of hours per day	Typical operation Acceptable range: 0-24
c. Number of days per week	Typical operation Acceptable range: 0-7
d. Number of weeks per year	Actual operation Acceptable range: 0-52
e. Percent of time emissions unit is operated each calendar quarter:	Actual percent of total annual operations that occurred in each season (e.g. 40% in Q1, 30% in Q2, 20% in Q3 and 10% in Q4) unit operated.
Sum of Q1+Q2=Q3+Q4 must = 100% (or 0%, if the unit was not operational for any quarter).	Q1 is January – March Q2 is April – June Q3 is July – September Q4 is October - December
11. Ozone season schedule – May 1 through September 30:	Actual operation during this period.

a. Ozone season hours per day	Typical operation Acceptable range: 0-24
b. Ozone seasons days per week	Typical operation Acceptable range: 0-7
c. Weeks operated in ozone season	Typical operation Acceptable range: 0-22

12. Emissions release point - select

Select the appropriate type of stack or release point

Non-Stack Release Points:		Physical Stacks
-Fugitive	-Horizontal	-Vertical
-Engine Exh	-Downward facing vent	-Vertical with rain cap/sleeve

What is a release point? What is the difference between stacks and non-stacks?

The Emission Release Point is the physical structure through which the emissions leave the facility and reach the ambient air. In the previous data system, ALL release points including downward facing and horizontal vents, engine exhausts, and fugitive releases were considered "stacks". In the new database, **only vertical release points are considered "stacks**" with assigned DEP and Facility stack numbers and an AP-STACK form.

If the unit has a physical stack, you must link the unit to that stack in question A.13.

Note: If you have installed a new stack, it will not populate the drop-down menu unless you first complete and validate an AP-STACK form prior to opening this AP-1. To complete the BWP AQ AP-STACK form, "SAVE AND EXIT" this AP-1 form. Open, complete, and validate the AP-STACK form of the new stack, and then return to this form.

Note: Some units exhaust vertically, but have housings shorter than 10 ft above the roof of the building (e.g., ventilation exhausts that may be 3-5 ft tall. This type of release point does not require a Stack form – it is considered to be a Non-Stack release point. The forms do not (yet) have a specific code for this type of exhaust. You should select "fugitive" for such a vertical vent (< 10 feet tall). Describe the release point briefly in the Notes field.

13. Link this unit to a physical stack (if applicable) - Pick from the list below.

Facility's stack identifier (from BWP AQ AP-Stack form) – to change stack name, use the Stack form. If the stack for this unit is not listed, save and exit this form now and complete a new Stack form **before** completing this form.

CAUTION:

- If the emission release point in Question #12 is vertical or vertical rain cap and the equipment, in Question #9, is a boiler or furnace, then this is a required field.
- If this unit's emissions release point is a new stack, you must have created and completed a BWP AQ AP-Stack form for that new stack, prior to filling out this form. If you do not have the stack #, you will be unable to validate this form; and will forced to save and exit the form. Once you have created, completed, and validated the new stack form, then you may return to complete the AP1 form.

14. Are there air pollution control devices on this emissions unit?

Check the appropriate yes or no box.
If no, skip to question 15.

If yes, answer a through i for each piece of air pollution control equipment associated with the emission's unit in a separate column.

Note: If other emissions units use the same air pollution control equipment, also report this information on the appropriate BWP AQ AP-1,AP-2 or AP-3 forms for those units.

Are Low Nox Burners considered control devices?

No – they are part of your equipment and should not be logged as separate control devices. If you have low NOx burners you should use emission factors that take into account their lower emissions. You should also mention in the notes that the unit incorporates low NOx burners. You can find such emission factors in EPA's emission factor database at: http://www.epa.gov/ttn/chief/efpac/index.html.

How to delete or replace an air pollution control device?

Delete an air pollution control device (APC) by entering a date in Decommission Date (A.14.h). Use this when you are removing the device permanently.

To replace a device: if the APC device was replaced in kind with a new model, enter the new installation date and replace the information on lines a-i, as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the APC equipment automatically.

a – e. Air pollution control device (description)

a. Type (Use the Drop-down Menu)
b. Manufacturer
c. Model Number
d. Facility's ID for this Device.
e. Installation Date (mm/dd/yyyy)

What to do if you don't know the date?

Provide your best approximation of the date if you do not know it.
Do not leave blank.

f – h. Air pollution control equipment dates and approval numbers:

f. MassDEP approval number (most recent)

If unknown, enter your best approximation.

Note: Not all air pollution control devices require plan approvals.

g. MassDEP approval date (mm/dd/yyyy)
h. Decommission date (mm/dd/yyyy)
Enter a date here only if the air pollution control device is being permanently removed and not replaced.

i. Percent overall efficiency – enter for all pollutants that the device was designed to control:

The *Percent Overall Efficiency* calculated which equals the APC equipment's Capture Efficiency (the percentage of the emissions that reach the air pollution control unit) multiplied by the APC equipment's *Control Efficiency* (the percentage of the emissions that are removed from the air stream by the Air Pollution Control Equipment.)

- If you have stack-testing data on control efficiency: Use that information.
- If you do not have stack-testing data: Use the manufacturer's suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range.

What is the % overall efficiency?

The % overall efficiency for a device equals its ("% capture efficiency" X "% control efficiency"). **It is critical for the automatic emissions calculations.** This information can be found in the plan approval application, MassDEP's approval for the device and/or in the manufacturer's specification for the device.

PM 10	VOC	HYC
PM 2.5	NO2	Hg
SO2	NH3	Pb
CO	HOC	

Other: List any substances not already listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.
Only one "Other" is available for each APC device,

15. Is there monitoring equipment on this emissions unit?	Answer Yes or No, as appropriate. If no, skip to the questions in Section B. Fuels and Emissions **Note:** Report on each monitor that is on the release point for this emissions unit in the separate columns provided. **Note:** If other emissions units use the same release point, also report this information on the BWP AQ AP-2 or AP-3 form for those units.
Fireye and other Flame monitors	Fireyes, or any other brand of flame monitors, are not monitors that must be reported on an AP-1 Form.
How to delete a monitor?	Delete a monitor by entering a date in Decommission Date (A.15.h). Use this when you are removing the monitor permanently.
How to replace a monitor?	If the monitor was replaced in kind with a new model, enter the new installation date and replace the information on lines b-i as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the monitor equipment automatically.
a. Monitor type:	Check the appropriate box for the type of monitoring device. Check only one for each monitor (use another column if there are other types of monitors on the release point.) CEMS, Opacity Other If other is checked then Describe "other" is required.
How do I use CEM data?	If you use CEMs to determine annual emissions, report the CEMS emissions value on your Source Registration form.
How do I use Part 75 reported values?	If your facility is subject to the annual emissions reporting under EPA's regulation 40 CFR Part 75, you must report the same value that you reported to EPA. See AP-1 Section B.2. below.
b. Manufacturer:	The name of the manufacturer of the monitoring equipment attached to the stack and the model number assigned by the manufacturer.
c. Model number:	
d. Monitor ID #:	The unique ID that the owner/operator of the facility assigned to the monitoring device. **Note:** For facilities subject to the reporting requirements of 40 CFR 75: use 3-digit monitoring system ID as your monitor ID number
e. Installation date:	For facilities subject to the reporting requirements of 40 CFR 75: use the "First Date System Reported Data" as the installation date.
f. DEP approval #:	From your permit or plan approval.
g. DEP approval date:	(mm/dd/yyyy)
h. Decommission date:	For facilities subject to the reporting requirements of 40 CFR 75: use the "Last Date System Reported Data" as the decommission date. Enter a date here only if the monitor is being permanently removed and not replaced. (mm/dd/yyyy)
i. Recorder?	Whether or not this device is attached to the monitor. Yes or No Check box
j. Audible alarm?	

k. Data System?

Whether or not a data system that continuously logs monitoring data for future review is attached to the monitor.
Yes or No Check box

What is a "data system"?

A data system continuously captures monitoring data for future review and analysis.

l. Monitored pollutants:

Check the contaminants that are monitored by the monitoring device:

PM 10	VOC	Oxygen	Opacity
PM 2.5	NO2	CO2	
SO2	NH3	H2S	
CO	Mercury	HCL	
Other – describe:	List any substances not already listed on the form that you are required to monitor per your plan approval, operating permit, or applicable regulation.		

B. FUELS AND EMISSIONS

Note: In general, the information requested below will be pre-populated from MassDEP's SSEIS database. However, certain data submitted to MassDEP on paper AP forms was not historically stored in SSEIS. That data will not appear on the electronic forms until it has been submitted in this new format.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

1. Fuel Name / Characteristics:

Fuel Name:

Your choice of a unique name for this fuel.

Fuel #:

Your choice of a unique number or code for this fuel.

How does eDEP handle multiple fuels?

In eDEP, a separate Section B form is automatically created for each additional fuel on record used in the emission unit.

In the SSEIS side-by-side paper system, each fuel was a "segment" and the MassDEP fuel number corresponds to the old SSEIS segment number.

Add a New Fuel:

Check the box if you need to add a fuel that you did not previously report (eDEP will add a blank Section B form to this AP-1 when you successfully validate it.)

Delete this fuel:

Check the box if you stopped using this fuel in this emission unit. You must still report for the year of record even if amount is "0" – the fuel will be removed from the unit for the next report cycle.

a. Source Classification Code (SCC)

The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-42 (http://www.epa.gov/ttn/chief/codes/) contains the codes for each type of process, as well as emission factors that can, in certain circumstances, be used to calculate emissions from each unit.

The system will automatically fill in the code description when the form is validated.

The SCC you select is used to supply the emission factors for the automatic emissions calculation feature included in the eDEP system. The list of SCC valid in eDEP can be found at: http://www.epa.gov/ttn/chief/codes/.

How does eDEP use Source Classification Codes (SCC)?

If the SCC listed on the form **is wrong**, enter the correct code.
If the form will **not accept the SCC** you are entering, contact MassDEP at air.quality@state.ma.us.

What SCC should be used for a residential boilers/water heater at a commercial/ institutional facility?

Use the following SSCodes:

Residual Oil (No. 6 Oil)	10300403
Distillate Oil (No. 2 Oil)	10300503
Natural Gas	10300603
Other fuels	same family of SCCodes

Are there any SCCodes that should not be utilized on Form AP-1

Form AP-1 is for combustion units and the auto calculation feature is an attribute specific to the AP-1 form and relies on combustion SCCs as the basis for selecting emission factors. SCCodes that are not for combustion units should not be used on the AP-1 Form, especially when using the auto calculation feature. The AP-1 Form will not validate non-Combustion SCCodes if the auto calculation feature is selected. Therefore, if non-Combustion SCCodes are to be used, you must calculate you own emissions.

You can identify combustion SCC for the from the "category" field in the "List of Valid Source Classification Codes (SCCs)" posted on the SR Web Page.

b. Type of fuel – check one:

Check the box for the type of fuel burned in this unit:

No. 2,	No. 6,	Coal,	Jet fuel,
No. 4	Diesel	Natural gas	Other: Describe

Note: If multiple types of fuel are used in this emission unit you must check the "Add a New Fuel" check box to add additional Section B forms for each fuel used. Once you successfully validate the current AP-1 the system will generate a blank Section B which will be found under this AP-1 as listed on the "related forms" web page.

c. Sulfur content for oils and coal: Acceptable Range (0 – 2.2)

The percentage of sulfur by weight for oil and coal, only.

.**TIP:** This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.

d. Ash Content for oils and coal (Acceptable Range (0 – 10)

The percentage of ash content by weight for oil and coal, only.

.**TIP:** This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.

e. Maximum hourly fuel rate for all firing burners:

- Amount
- Units per hour

The maximum fuel that all burners in this emission unit can fire in one hour, and the units of measurement from the drop-down menu (*e.g., gallons per hour, tons per hour, million cubic feet per hour, etc.)*

If your units are not on the drop-down menu, email air.quality@state.ma.us
Units must match the SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. If you select incorrectly, the system will indicate the correct value after you validate. Remember to check that your Amount matches the correct units. For example, you may need to express a firing rate of 72 gallons/hr as 0.072 1000 gallons/hr when you select an SCC code for liquid fuel.

f. Do you have fuel usage restrictions?	These would have been expressed in a regulation, the plan approval you received from MassDEP for this emission unit or one that applies to several emission units. Check the appropriate yes or no box. If No, then skip to Question 2. If the same restrictions also apply to other emission units, report the restrictions on those emission unit forms, as well. Cite the most recent fuel use restriction applicable to the fuel as it is used in this emission unit. The most recent fuel use restriction may be found in a regulation, an approval that applies only to this emission unit, or one that applies to several emission units, or the facility as a whole.
What if I have multiple unit fuel restrictions and multiple approvals?	If a restriction applies to multiple units then list it here and on the forms for each other unit to which it applies.
g. DEP approval number for fuel restrictions: most recent for this fuel.	Obtain this from your plan approval letter. Cite either plan approval or regulation.
What if the restriction is mentioned in multiple approvals?	Enter the most recent approval number for the restriction.
h. Annual usage restriction (amount or hours) for this fuel: Quantity Units	Provide the maximum amount of fuel you are allowed to use in a year per your permit and the units of measurement from the drop down list, or the maximum amount of time you are allowed to use the unit in a year per your permit and the unit of measurement. Obtain this from your plan approval letter. If your units are not on the drop-down menu, email air.quality@state.ma.us
What if the restriction is mentioned in multiple approvals?	Enter that same quantity here and on the forms for each other unit to which it applies.
i. Short term fuel usage restriction (amount or hours) For this fuel: Quantity: Units: Per:	Provide the maximum amount of fuel or time you are allowed to use over the short-term period specified in your plan approval. Obtain this from your plan approval letter. Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email air.quality@state.ma.us Check the appropriate box for the time period: Month, Week, Day or Hour.
2. Annual usage: a. Amount –year of record	The actual amount of fuel used in this emission unit during the calendar year being reported, and the units of measurement from a drop-down menu. Enter "0" if fuel not used in the year of record.
b. Units	If your units are not on the drop-down menu, email air.quality@state.ma.us
c. Total annual usage for prior year of record – eDEP only	For electronic repeat filers: This information will be provided by the system. For new emission units: This section is not applicable IF the unit was not operated during the calendar year prior to the year being reported. **TIP:** Compare the annual usage from prior year of record to the current year's usage as a check. If they are orders of magnitude off, check the units.

3. Total emissions for this fuel **only** in tons per year:

Provide the following information for all pollutants emitted by the emission unit

PM10	SO2	CO	NH3
PM2.5	NO2	VOC	
Other:	Describe		

Calculations: Read First

The form will automatically calculate the actual and potential emissions unless you check a box to manually enter emissions for each specific pollutant.

Why you may want to calculate your own emissions values?

The form will calculate emissions from your annual throughput, control efficiencies that you have entered for this unit, and EPA default emission factors and the control efficiency you entered when the emission unit is equipped with air pollution control equipment. To calculate your own emissions, check the box next to each pollutant's name (eDEP will calculate the emissions for any pollutant where you do not check the box).

The EPA emission factors are generic and conservative – they may overestimate your emissions. Because they are generic, the EPA SCC emission factors are not applicable in all situations. They may overstate emissions for an emission unit subject to certain BACT (Best Available Control Technology) or RACT (Reasonably Available Control Technology) requirements. Please see Appendix C for more guidance on calculating your own emissions.

Actual (in Tons) for previous year - eDEP only:

This information will be provided by the system.
For new emission units: This section is not applicable.

What are "actual emissions"?

Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit during the year covered by the report (the year of record). They are the sum of the emissions associated with each fuel. eDEP will calculate the total actual emissions from the emissions from each fuel, unless you have checked the box next to the pollutant. Please see Appendix C for more detailed information on calculating actual emissions.

Actual (in Tons) for year of record

: Put a check in the appropriate box if you choose to calculate the emissions from this fuel yourself. Otherwise the system will calculate this information for each pollutant except for those that you put a check in the box.

Note: In many cases AP-42 or FIRE emission factors found in EPA's website (http://www.epa.gov/ttn/chief/efpac/index.html) can be used to estimate actual emissions.

CAUTION: The AP-42/FIRE emission factors are generic. Therefore they are not appropriate for facilities that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements such as NO_X RACT for boilers. Facilities subject to RACT or BACT must use the emission factors determined through stack testing or the permitting process because AP-42/FIRE will likely overstate emissions**.**

Note: For facilities that also report under 40 CFR 75: If the unit reports SO2 or NOx under 40 CFR 75 monitoring provisions, on an annual basis, then the total emissions for all fuels reported here should equal that reported under 40 CFR 75.

How do I use CEMs data?

If you use CEMs to determine annual emissions, report the CEMS emissions value on your Source Registration form.

How do I use Part 75 reported values?

If your large facility is subject to the annual emissions reporting under EPA's regulation 40 CFR Part 75, you must report the same value that you reported to EPA.

Unrestricted Potential Emissions (in Tons)

Report the Unrestricted Potential Emissions. Unrestricted Potential Emissions are the uncontrolled maximum emissions assuming the emission unit operates at maximum capacity 24 hours per day, seven days a week. The definition of Potential Emissions in 310 CMR 7.00 takes into account the restrictions of an emission units plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations. However, the number entered here should not consider restrictions. The restrictions are to be entered on the forms in the next section.

What are unrestricted potential emissions?

The emissions resulting from the maximum operation of the equipment irrespective of any regulatory restrictions. **(8760 hrs X Max Firing Rate X Emission Factor)**

Note: this is not the limit imposed by any regulation, RES, or approval – please enter such restricted limits under "Maximum allowed emissions" below.

Emission factor

Provide this information only if you are calculating the emissions yourself, otherwise, the emission factor is provided based upon the SCC Code chosen for this emission unit and fuel combination.

Emission factor units in pounds per unit:

Note: In many cases, AP-42/FIRE emission factors found in EPA's website (http://www.epa.gov/ttn/chief/efpac/index.html) can be used to estimate actual emissions.

What are emission factors?

Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions are obtained by multiplying [**EF in lb/fuel unit] x [fuel usage] / [2000 lb per ton**] **= TPY of emissions**. If you allow eDEP to calculate your emissions, this field will be filled with EPA default emission factors based on the SCC. If you choose to calculate your own emissions, you must enter the emission factor that you used.

The EPA emission factors used by eDEP can be found at: http://mass.gov/dep/service/compliance/sr.htm under Reference Links at the center of the page.

Because they are generic, the EPA SCC emission factors are not applicable in all situations. They may overstate emissions for facilities subject to certain BACT (Best Available Control Technology) or RACT (Reasonably Available Control Technology) requirements.

See Appendix C for more information about using emissions factors to calculate emissions.

Maximum allowed emissions (in Tons) - annual:
Maximum allowed emissions (in Tons) - short term:
Short term period (or MMBtu)

Provide this information if there is a plan approval or a regulation for this fuel type (as opposed to for the emission unit as a whole).

When to enter maximum allowed emissions?

Complete the "maximum allowed emissions" fields if there is an annual or short-term emission limitation **applicable to the fuel** expressed **in either a MassDEP approval or a regulation**. Be sure to enter the approval number or regulation under "Basis" below.

Basis- DEP approval number or regulation:	Provide either the regulatory citation if the emission unit was installed through a permit by rule or the plan approval number. **Note:** Some emission units will not have plan approvals because they are: 1) "Permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03, 2) Below the threshold for which a plan approval or permit is required, or 3) Installed prior to the effective date of the regulation. If a plan approval is required: Write the approval number for the plan approval that approved the installation of the emission unit/segment. This number is found on the letter sent by MassDEP that informed you that they approved the unit. If a plan approval is not required: Cite the regulation under which the equipment was installed.
4. Ozone season emissions – May 1 through September 30: a. Typical day VOC emissions – pounds per day b. Typical day NOx emissions – pounds per day	Ozone season calculation options: This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at 4.a. and 4.b.
What if I have more than one fuel?	**Note:** If you have more than 1 fuel, **this space on the form is blank** – you will be provided with a space for entering ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your fuels.
Check to enter your own values	**Note:** The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes.

C. NOTES AND ATTACHMENTS

This section is to identify any explanatory material the preparer is choosing to submit along with this form.

If the material can be sent electronically, check the box for the appropriate form.

If paper information must be submitted, list the titles of the documents being submitted on the lines provided and mail them to:
Mr. Robert Boisselle
Department of Environmental Protection, 8th Floor
One Winter Street
Boston, MA 02108

Note: You must click <Validate> now to move on to the next part of the form or to create additional Section B. Fuels and Emissions Forms and then to create Section D: Total Emissions for Emissions Unit. The system will force you to make any necessary corrections.

Once you have made all of the required corrections you will be returned to the <Related Forms Transaction ID page>. To continue your work on this emissions unit, click on the <AQ AP1 Sec B (or D) form> you see listed under the form you were just working on.

D. TOTAL EMISSIONS FOR EMISSIONS UNIT

	The Actual, Potential and, if applicable, Permitted emissions from this unit for each listed air contaminant during the calendar year being reported.
1. Total Emissions for this emission unit in tons per year	Calculations: This form calculates this emission unit's total actual and maximum potential emissions (if you have correctly provided all of the emissions for each fuel in each Section B). Return to Section B if you need to correct those numbers.
What are total emissions for this emission unit?	This form automatically calculates the total actual and maximum potential emissions of each pollutant from this emission unit. It calculates these values from the data you entered for each fuel. Please enter any emission limits that apply to the unit as a whole (regardless of fuel) under "Permitted" below.
Actual (in Tons) for previous year	For electronic repeat filers: This information will be provided by the system. For new emission units: This section is not applicable.
Actual (in Tons) Emissions	The actual emissions for the calendar year being reported For electronic filers: this information will be provided by the system and is the sum of the emissions from each fuel (from each Section B).
Potential emissions (in Tons) at maximum capacity:	For electronic filers: This information will be calculated by the system and is the maximum unrestricted potential to emit from all fuels (Section Bs).
Maximum allowed emissions (in Tons) – annual	Maximum annual emissions allowed pursuant to your permit or plan approval.
Maximum allowed emissions (in Tons) - short term	These questions only apply if this emission unit is subject to a plan approval or permit that restricts operations or emissions, regardless of fuel. If the restriction is fuel-specific, it should be entered in the appropriate fuel's Section B.
Short term period:	**Note:** Some emission units will not have plan approvals because they are "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03, they are below the threshold for which a plan approval or permit is required, or they were installed prior to the effective date of the regulation.
Basis – DEP approval number or regulation:	If a plan approval is required: write the approval number for the plan approval that approved the installation of the emission unit/segment. This number is found on the letter sent by MassDEP that informed you that they approved the unit. If a plan approval is not required: Cite the regulation under which the equipment was installed that specifies the restriction.

When do I complete the "allowable" emission fields?	Complete the "allowable" field if there is an annual or a short-term **emission limitation applicable to the emission unit as a whole** expressed in either a MassDEP approval or a regulation. Be sure to enter the approval number or regulation under "Basis".
What if a restriction applies to multiple units?	Then list it here and on the forms for each other unit to which it applies. Make a note in Section C that it applies to multiple units and describe the restriction.
2. Ozone season schedule - May 1 through September 30:	Ozone season calculation options: This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at 2a. and 2b. For electronic filers: The system will calculate this information on the basis of data you supplied on the form.
a. Typical day VOC emissions – pounds per day	**Note:** If the emission unit burns more than one fuel, you will be required to complete the ozone season emissions in Section D, after you have entered the throughput and emissions data for each of the fuels in Section B.
b. Typical day NOx emissions – pounds per day	**Note:** for facilities subject to the reporting requirements of 40 CFR 75: You **must calculate** your ozone emissions according to the following formula, and overwrite the pre-populated estimate with the result of your calculation: [Actual Ozone Season NOx emissions reported under 40 CFR 75 in tons/day] / [Actual number of days operated during the ozone season]
Check to enter your own values	**Note:** The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes.

BWP AQ AP-2 Emission Unit – Process Equipment Instructions

PURPOSE

This form describes equipment, processes, and associated air pollution emissions from non-combustion related production processes for the calendar year being reported.

WHEN IS THIS FORM APPLICABLE?

This form applies to all emission units at your facility that release any of the air contaminants below from any process EXCEPT:

- Fuel burning (combustion units are generally reported on an AP-1 EXCEPT where the combustion is part of a process unit's function, such as an oven for curing paint on part; in such a case the oven is reported on an AP2 with the combustion fuel use and emissions reported as one segment (Section B) in the AP2),
- Incineration (reported on an AP-3),
-
- Insignificant activities ⓘ. (See definition in 310 CMR 7.00 Appendix C(5)(i).)

Contaminant
Particulate Matter < = 10 microns
Sulfur Dioxide
Volatile Organic Compounds
Nitrogen Dioxide
Lead
Ammonia
Halogenated Organic Compounds
t-Butyl Acetate

HOW MANY VERSIONS OF THIS FORM YOU HAVE TO SUBMIT?

One form is required for each process emission unit, including those that you have added or decommissioned since your last source registration.

An emissions unit is any unit operation that releases an air contaminant. Any particular production line is a series of unit operations: activities, or processes used to produce a product. A unit operation is generally a piece of equipment or a step in the production process. Identical pieces of equipment that are used interchangeably to create the same product may be reported on one form.

For example, if the facility has three different coating operations, one AP-2 is required for each. However, two coating lines using the same equipment and raw materials, operated in tandem to produce the same product, can be considered one emission unit and combined on one AP-2.

NOTE: Once your facility has exceeded any threshold for Source Registration, you must report on all operations at your facility that can release air contaminants, No sources may be excluded from Source Registration, except those listed as "insignificant activities" under 310 CMR 7 Appendix C(5)(i)ⓘ. This includes units that are idle – you must report on all idle processes at the facility whenever you submit a Source Registration.

TIP: See AP-42 (http://www.epa.gov/ttn/chief) for a list of the various operations and the air contaminants they release.

CAUTION: FOR FILERS WITH NEW PROCESS EMISSIONS UNITS SINCE THEIR LAST SOURCE REGISTRATION

You must create a new emission's unit form for any new emission unit. If you have not already created the new emissions unit (when first opening your source registration package), you must either:
1) Under <Related Forms>, open the first form labeled <AQ Source Registration Package>;

- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under <Related Forms>, select <New AP Form Creator>
- Choose the appropriate form and enter the number of new units
- Validate the form
- Follow subsequent instructions

----or----

2) You must create a new eDEP partial AQ Source Registration package for that emission unit. Once you have submitted the package you are working on:

- Return to "Start New",
- Select "AQ Source Registration Package";
- In SR Overview Form: B.1: Amend a Source Registration,
- Select "Check here to add new units:"
- Follow subsequent instructions

CAUTION: If you realize in the midst of filling out this SR package that you need to create additional forms, DO NOT return to this Overview form UNLESS you are willing to revalidate each previously validated form. Revalidation requires that you must open and revalidate every form in the package – you don't lose any of the data you have entered, but the process can be time consuming, particularly for a facility with more than 5-10 units.

The best way to add emission units or stacks AFTER you have completed much of your package may be by submitting a supplemental package (Option 2 above).

CAUTION: the order in which you complete your forms

If this unit's emissions release point is new and vents through a stack: you must have created and validated a BWP AQ AP-Stack form for the new stack prior to filling out this form. The stack drop down-menu (A.13) will not contain the new stack and you will be unable to validate this form and will be forced to save your work, exit, and return to it to complete it after you have completed and validated the new stack form.

A. EMISSION UNIT – PROCESS DESCRIPTION

Note: In general the information requested below will be pre-populated from MassDEP's SSEIS database. However, certain data submitted to MassDEP on paper AP forms was not historically stored in SSEIS and that data will not appear on the electronic form until it has been submitted on the new forms. With certain exceptions, which will be noted, the preparer can edit any information listed below.

TIP: If you obtained a plan approval for the emission unit(s) you are reporting on you will have received two documents from MassDEP: a plan approval letter and a copy of the permit application that you submitted to MassDEP. It will be easier to fill out the Source Registration forms if you refer to those two documents. .

How should Ovens be reported?

How should Dryers be reported?

Ovens and dryers should be reported on one form only. If the oven or dryer has no emissions other than those from fuel combustion (the oven or dryer is used to drive off water and produces water vapor only), then Form AP-1 pertaining to fuel utilization emission units should be used. This will allow the auto calculation feature to be utilized.

If this is not the case and other emissions are present, such as solvents that are baked off, then the oven or dryer should be reported on Form AP-2 for process emission units.

The combustion emissions should be reported as one material throughput (segment), and the material being baked off as a separate material throughput (segment). Use a fuel combustion SCCode for the fuel segment and calculate your own emissions.

If you have an oven or dryer that is currently coded to an AP-1 Form that needs to be recoded to an AP-2 Form, contact the SR Help Desk so that they can change the forms for you prior to your Source Registration.

How do I report emissions from fuel use of a thermal oxidizer?

If you have a thermal oxidizer on an emission unit that emits VOCs, you also need to report the emissions from the combustion that fuel. To do this, add another segment or "raw material" to the AP-2 Form for the unit in order to report emissions from fuel combustion. After you check "Add Raw Material" and validate, another Section B will be generated on which you can enter the natural gas combustion emissions. You will need to enter a fuel combustion SCC and look up the emission factors for fuel combustion unit and calculate the emissions yourself.

1. Facility Identifiers

The name and identifying numbers of the facility or plant that is reporting.

a. Facility name

This will be pre-populated from the information on your BWP AQ SP-SR Form.

b. DEP account number

Note: You cannot change your facility's name on this form. To change it you must contact your MassDEP Regional Office FMF Data Manager.

c. Facility AQ identifier – SSEIS ID

How does the new emission unit numbering system compare to the Side-by-Side system?

On the old Side-by-Side form, individual "emission units" were called "points". The DEP number (2.c) is the point number from the old forms. Points were assigned to "stacks" whether there existed an actual stack or not. The new system is organized around the emission units (points). A stackis only assigned to a point if it is an actual, vertical stack (such stacks keep their old stack number).

eDEP allows you to change the name (2.a) and give your own number (2.b) to each emission unit. MassDEP keeps track of the units by the DEP number (2.c), and therefore you cannot change it.

2. Emission Unit Identifiers

If this is a new Emission Unit: Assign the emission unit a name/number in order to uniquely identify it.
If this is an existing Emission Unit: Assign or change the emission unit name/number in order to uniquely identify it.

a. Facility's choice of emission unit name

A unique name of your choice that will allow you to recognize this unit on future reports.

b. Facility's emission unit number / code

A unique number or code of your choice that will allow you to recognize this unit on future reports.
Example: Degreaser #1, Coater#3

If this is an existing emissions unit, the information will be pre-populated.

c. DEP emissions unit # - old SSEIS point #

If this is a new Emissions Unit Leave blank – MassDEP will assign this number.
If this is an existing Emissions Unit, the information will be pre-populated for existing emissions units.
A unique number assigned by MassDEP that allows MassDEP to recognize the unit on future reports.

d. Combined units- enter number of individual units

Total number of individual units combined on this AP-2.

What are combined units / when can individual unit operations be reported as combined units?

Similar pieces of equipment that are used interchangeably to create the same product may be reported on one form as a combined emission unit. Similar pieces of equipment that are individually below the reporting threshold, which have the same applicable requirements may be reported on one form as a combined emission unit.

When entering data for combined units use these guidelines:

- Make/Model No – use the most common make/model or enter "combined".
- Installation Date – enter the install date for the oldest of the individual units.
- Permit Date – enter the most recent permit number and date for the units.
- Max capacity / potential – enter the sum of the maximum capacities of all of the individual units as the maximum capacity for the combined unit.
- Decommission date – do not decommission until the last individual unit is gone; if you need to add or subtract units from the combined unit, then increase or decrease the value in the Combined Units field to reflect the change and explain in the Notes field.
- Explain in the Notes field which units have been combined (list them) and any issues or oddities about the combined unit. Make a note in the Notes field with the locations of the combined units if they are not in the same building at the facility.

3. DEP Air Quality Approvals

If a plan approval is required: Write the number for the plan approval that allowed the installation of the emission unit. This number is found on the letter sent by MassDEP that informed you that they approved the unit.

Note: Some emission units will not have plan approvals because they were "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03, they are below the threshold for which a plan approval or permit is required, or they were installed before the effective date of the regulation.

What if the emission unit has more than one DEP approval?

Cite the most recent plan approval that includes specific requirements applicable to this emission unit. Do not cite an approval that sets a general requirement for the facility as a whole, unless it also establishes specific conditions for this emission unit. Approvals that apply facility-wide are cited on the AP-TES form. Similarly do not cite your most recent Air Operating Permit if you have one unless a more stringent limit is established in the operating permit for the emission unit. Usually the Air Operating Permit is a compilation of requirements included in other plan approvals or applicable regulations.

Note: A particular plan approval may be cited more than once in the package or on a form. For example, a plan approval that includes specific requirements for more than one emission unit will be cited on the AP form for each emission unit it covers. Similarly if a plan approval specifies conditions for the emission unit and for the monitor, raw material, fuel, and/or air pollution control device, it will be cited on each applicable question on the emission unit form.

a. Most recent approval

Most recent plan approval or emission control plan or restricted emission status (excluding the facility's

number	"Air Operating Permit") number applicable to this unit, from MassDEP plan approval letter.
b. DEP approval date (mm/dd/yyyy)	Date of most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") applicable to this unit, from MassDEP plan approval letter.
4. Is this unit exempt under CMR 7.02 Exemptions from Plan Approval?	Check the appropriate yes or no box.
5. If exempt from Plan Approval, indicate reason why (cite specific MassDEP AQ Regulation)	If Queston 4 is answered yes, then a response is required. If Question 4 is answered no, then skip to Question 6.
6. Equipment manufacturer and model number and type	Provide the requested information.
a. Manufacturer	Firm that built the unit, information can be usually found on metal nameplate on unit. Do not leave blank: enter unknown if unknown.
b. Model number	Information can be found on metal nameplate on unit. Do not leave blank: enter unknown if unknown.
c. Equipment type	Describe (e.g. vapor degreaser).
7. Emission unit installation and decommission dates	Provide the requested dates in the appropriate lines. If the emission unit is very old and you do not know the installation date, make your best approximation.
a. Installation dates – estimate if unknown (mm/dd/yyyy)	
b. Decommission dates – If applicable (mm/dd/yyyy)	Complete only if the unit was shutdown permanently or replaced any time before December 31 of the year of record.
How / when to delete a unit?	Enter a decommission date in 6.b if the unit is being **permanently taken out of service**. If the decommissioned unit operated in the year of record, the emissions from that unit must be included in this Source Registration Package. Therefore units "decommissioned" in this package will remain on the list of emission units for this year of record. They will NOT appear on the NEXT source registration package however. **Note:** If you decommissioned a unit prior to the year of record (and you are decommissioning it in this package) you must enter zero for the maximum hourly fuel rate, annual fuel usage, actual emissions, and potential emissions. Failing to enter zeros will cause the form to add non-zero potential emissions to the facility wide PTE on the AP-TES. N.B.: IF you've combined emission units on this form DO NOT enter a decommission date unless ALL of the combined emission units are decommissioned. In field 2.d., Enter the remaining number of combined units after subtracting decommissioned to indicate that an emission unit has been permanently

	taken out of service.
8. Emission unit replacement a. Is this unit replacing another emission unit**?**	Check the appropriate box: yes or no. If yes, choose from the drop-down menu, the emission unit number for the emissions unit being replaced by this unit.
How to be sure the unit being replaced appears in this menu **What if one emission unit is replacing more than one unit?**	Line A.8. "DEP's emission unit number and facility's name for emission unit" are mandatory fields when the "yes" box is checked. However the unit being replaced **will not appear as a choice** on the drop-down menu **until it is decommissioned**. You will not be able to complete and validate the AP form for a replacement unit until you have first entered a decommission date and completed and validated the AP form for the unit it is replacing. If this unit is replacing another unit that has not been "decommissioned", you must: 1) save and exit this AP-2 form, 2) open the AP-2 form for the unit being replaced, 3) enter the decommission date, and 4) complete and validate the form - before you can complete this AP-2 Form. If one new emission unit is replacing several units, pick one of the units being replaced on the drop-down menu and note the others in Section C Notes and Attachments.
9. Additional state reporting requirements	Check the appropriate boxes to report on the existence of any reporting requirements other than source registration for this emission unit and the frequency of that reporting.
a. Are there other routine air quality reporting requirements for this emission unit?	If yes, specify reporting frequency in Question 9.b. If no, skip to Question 10.
b. Reporting frequency – check all that apply:	Monthly, Quarterly, Semi-annual, Annual, RES (Include Operating Permit and Plan Approval reports, but not exceedance reporting)
10. Hours of operation for the emission unit:	Report on typical operation.
a. Check if typically continuously operated - 24 x 7 x 52	
b. Number of hours per day	Typical operation Acceptable range: 0-24
c. Number Of days Per Week	Typical operation Acceptable range: 0-7
d. Number of weeks per year	Actual operation Acceptable range: 0-52
e. Percent of total annual operation that occurs in each calendar quarter: Sum of Q1+Q2=Q3+Q4 must = 100% (or 0%, if the unit was not operational for all	Actual percent of total annual operations that occurred in each season (e.g. 40% in Q1, 30% in Q2, 20% in Q3 and 10% in Q4) unit operated. Q1 is January – March Q2 is April – June Q3 is July – September Q4 is October - December

quarters).

11. Ozone season schedule – May 1 through September 30:	Actual operation during this period.
a. Ozone season hours per day	typical operation Acceptable range: 0-24
b. Ozone seasons days per week	typical operation Acceptable range: 0-7
c. Weeks operated in ozone season	typical operation Acceptable range: 0-22
12. Emissions release point	Select the appropriate type of stack or release point Non-Stack Release Points: Physical Stacks: -Fugitive - Horizontal vent -Vertical - Gooseneck - Downward facing vent -Vertical with rain cap/sleeve
What are release points?	The Emission Release Point is the physical structure through which the emissions leave the facility and reach the ambient air. In the previous data system, ALL release points, including downward facing and horizontal vents, goosenecks, and fugitive releases were considered "stacks". In the new database, only vertical release points are considered "stacks" with assigned DEP and Facility stack numbers and an AP-STACK form.
What is the difference between stacks and non-stacks? **Unusual exhausts, such as short vertical vents**	If the unit has a physical stack, you must link the unit to that stack in question A.13. **Note:** If you have installed a new stack, it will not populate the dropdown unless you first complete and validate an AP-STACK form prior to opening this AP-2. To complete the AP-STACK form, "SAVE AND EXIT" this AP-2 form. Open, complete, and validate the AP-STACK form of the new stack, and then return to this form. **Note:** Some units exhaust vertically, but have housings shorter than 10 ft above the roof of the building (e.g., ventilation exhausts that may be 3-5 ft tall. This type of release point does not require a Stack form – it is considered to be a Non-Stack release point. The forms do not (yet) have a specific code for this type of exhaust. You should select "fugitive" for such a vertical vent (< 10 feet tall). Describe the release point briefly in the Notes field.
13. Link this emission unit to a physical stack (if applicable) – pick from the list below:	Facility's stack identifier (from BWP AQ AP-Stack form) – to change stack name use the Stack form. If the stack for this unit is not listed, save and exit this form now and complete a new Stack form **before** completing this form. **CAUTION:** If this unit's emissions release point is a new stack, you must have created and completed a BWP AQ AP-Stack form for that new stack, prior to filling out this form. If the appropriate stack #does not appear in the drop-down menu, you will be unable to validate this form; and must save and exit the form. Once you have created, completed, and validated the new stack form, then you may return to complete the emission unit's AP2 form.
14. Is there monitoring equipment on this emissions unit or its related control device?	Answer Yes or No as appropriate, if no skip to question 16. **Note:** Report on each monitor that is on the release point for this emissions unit in the separate columns provided. **Note:** If other emissions units use the same release point, also report this information on the appropriate BWP AQ AP-1, AP-2 or AP-3 forms for those units.

How to delete a monitor?

Delete a monitor by entering a date in Decommission Date (A.14.h). Use this when you are removing the monitor permanently.

How to replace a monitor?

If the monitor was replaced in kind with a new model, enter the new installation date and replace the information on lines b-i as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the monitor equipment automatically.

a. Monitor type:

Check the appropriate box for the type of monitoring device. Check only one for each monitor (use another column if there are other types of monitors on the release point.)

CEMS,	Time recorder	Other - If other is checked then Describe
Opacity	Temperature recorder	"other" is required.
Fuel flow meter	Pressure	

b. Manufacturer:

The name of the manufacturer of the monitoring equipment

c. Model number:

The model number assigned by the manufacturer.

d. Monitor ID #:

The unique ID number/name that the facility has assigned to this piece of monitoring equipment.

e. Installation date:

Estimate if unknown.

f. DEP approval #:

From your permit or plan approval.

g. DEP approval date: (mm/dd/yyyy)

h. Decommission date:

Enter a date here only if the monitor is being permanently removed and not just replaced.

i. Recorder?

Whether or not these devices are attached to the monitor.
Yes or No check box

j. Audible alarm?

k. Data System?

Whether or not a data system that continuously logs monitoring data for future review is attached to the monitor.
Yes or No check box

What is a "data system"?

A data system continuously captures monitoring data for future review and analysis.

l. Monitored pollutants:

Check all contaminants that are measured by the monitoring unit

PM 10	VOC	Oxygen	Opacity
PM 2.5	NO2	CO2	
SO2	NH3	H2S	
CO	Mercury	HCL	

Other– describe: List any substances not already listed on the form that you are required to monitor per your plan approval, operating permit, or applicable regulation

15. Are there air pollution control devices on this emissions unit?

Check the appropriate yes or no box.
If the answer to Question 15 is no, skip to Section B.

If yes, answer a through i for each piece of air pollution control equipment associated with the emission's unit in a separate column

Note: If other emissions units use the same air pollution control equipment also report this information on the appropriate BWP AQ AP-1, AP-2 or AP-3 forms for those units. If you have more than three control devices, checking the box in the top-right of the form will lead you through the process of creating additional forms.
Note: in order to create and access the new air pollution control device forms you will have to:

1. Click on validate to enter the data you have provided on this form up to this point into the

system. The system will force you to correct any errors before it will create the new <AP2-APC form> (which will return you to the <Related Forms – Transactions ID page>).

2. Click on, complete, and validate the new <AP-2 APC form> (which will return you to the <Related Forms – Transactions ID page>).
3. Reopen and finish the rest of this form.

Check here if you need to report more than 3 air pollution control devices on this unit.

eDEP will add another page of control devices after this form (see above).

How to delete or replace an air pollution control device?

Delete an air pollution control device (APC) by entering a date in Decommission Date (A.15.h). Use this when you are removing the device permanently.

To replace a device: if the APC device was replaced in kind with a new model, enter the new installation date and replace the information on lines a.-i. as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the APC equipment automatically.

a. – d. Air pollution control device (description)

a. Type from the drop-down menu
b. Manufacturer
c. Model number
d. Facility's ID for this device (the unique number assigned by the facility for that piece of air pollution control equipment)

How is a flare reported?

When a flare is a control device for a process emission unit, is should be reported as such on the AP-2 Form for that process unit. If this unit was previously reported as an incinerator on an AP-3 Form, please do the following:

1) report the flare on the AP-2 Process Unit Form that it controls,
2) note in the Notes Section on the AP-2 Form that you are reporting the on the AP-2 Form rather than the AP-3 Form, and
3) enter a decommission date in the AP-3 Form (causing it to be removed in future submittals) and enter 0 for all throughputs and emissions.

EXCEPTION: Flares on landfills should be reported on an AP-1 Form.

What to do if you don't know the date?

Provide your best approximation of the date if you do not know it.
Do not leave blank.

e. – g. Air pollution control equipment dates and approval numbers:

e. Installation date (mm/dd/yyyy)
f. DEP approval number (most recent)
g. DEP approval date (mm/dd/yyyy)

If unknown, enter your best approximation.

Note: Not all air pollution control devices require plan approvals.

h. Decommission date (mm/dd/yyyy)

Date equipment taken out of service. Only if permanently removing and not replacing.

i. Percent overall efficiency – enter for all pollutants that the device was designed to control:

The *Percent Overall Efficiency* that equals the APC equipment's Capture Efficiency (the percentage of the emissions that reach the air pollution control unit) multiplied by the APC equipment's *Control Efficiency* (the percentage of the emissions that are removed from the air stream by the Air Pollution Control Equipment.)

- If you have stack-testing data on control efficiency: Use that information.
- If you do not have stack-testing data: Use the manufacturer's suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range.

What is the % overall efficiency?

The % overall efficiency for a device equals its ("% capture efficiency" X "% control efficiency"). **It is critical for the automatic emissions calculations.** This information can be found in the plan approval application, MassDEP's approval for the device and/or in the manufacturer's specification for the device.

PM 10	VOC	HYC
PM 2.5	NO2	Hg
SO2	NH3	Pb
CO	HOC	

Other: List any pollutants not already listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation.
Only one "Other" is available for each APC device,

B. EMISSIONS FOR RAW MATERIALS / FINISHED PRODUCTS

Note: In general, the information requested below will be pre-populated from MassDEP's database. However, certain data submitted to MassDEP on paper AP forms was not historically stored in the old SSEIS database. That data will not appear on the electronic forms until it has been submitted in this new format. With certain exceptions, which will be noted, the preparer can edit any information listed below.
Note: Section B of this form must be completed for each raw material/finished product that can emit air contaminants used in this emissions unit.

Special rules for organic compounds

If an organic compound is used in an emission unit:	Submit:
To manufacture another chemical or to make a formulation ⓘ	One Section B for each individual organic compound used in this emission unit.
As a formulation ⓘ (e.g., to paint, print, or otherwise coat a product)	One Section B is required for EACH FORMULATION used in this emission unit.
As a solvent thinner or to clean the formulation ⓘ from the processing equipment	One Section B is required for each separate solvent thinner used in this emission unit. (Note this information used to be reported with a formulation)
For degreasing	One Section B is required for EACH degreasing formulation used in the emission unit.

CAUTION: If the same raw material is used or product is produced in more than one emission unit, and you were unable to combine them on one AP-2 form, then this raw material needs to be reported on the individual emission unit's AP-2 forms.

How does eDEP handle multiple raw materials or finished products?

In eDEP, a separate Section B form is automatically created for each raw material or finished product on record for this emission unit. If you need to add a new raw material or finished product, or ceased using or making a specific raw material or finished product, check the boxes at the top to indicate the change. In the SSEIS side-by-side paper system, each raw material or finished product was a "segment" and the DEP number corresponds to the old SSEIS segment number.

Add a New material/product

Check the box if you need to add a material/product that you did not report on previously (eDEP will add a blank Section B form to your package when you validate this form).

Delete this material/product:

Check the box if you stopped using this material or making this product in this emission unit permanently. You must still report data for this year of record even if amount is "0" – the material/product will be removed in the next report cycle.

1. Operation description:

a. Raw material or finished product name:

Your choice of a unique name for this raw material / finished product.

Provide the information requested.

b. Is material/product an input or output?

Note: The DEP number given here cannot be edited. It corresponds to the old SSEIS segment number and is how MassDEP tracks the raw material/product for this emission unit.

c. Process description:

A brief description of the process and the types of activities performed by equipment in the emission unit *(e.g., Cleaning – degreasing*)

Write a brief description of the process in which the raw material is used.

d. SCC - see instructions

The SCC is a code for the type of unit operation or production process. EPA's AP-42 (http://www.epa.gov/ttn/chief/codes/) contains the codes for each type of process, as well as, emission factors that can, in certain circumstances, be used to calculate emissions from each unit process.

For electronic filers: The system will automatically fill in the code description.

Where do you find the Source Classification Code (SCC)?

SCCs are standard codes EPA uses to identify different operations and the associated emissions factors. The list of SCC valid in eDEP can be found at
http://mass.gov/dep/service/compliance/sr.htm/Finding_SCC.htm
If the SCC listed on the form **is wrong,** enter the correct code.
If the form will **not accept the SCC** you are entering, contact MassDEP at air.quality@state.ma.us.

e. Maximum process rate for material/product:

- Amount
- Units per hour

The maximum rate at which raw materials can be used in the emission unit, expressed in measurable units *(e.g., pounds of material or per hour or gallons per hour)*,I will be on the drop-down menu. If the units you use are not listed call MassDEP.

Units must match the SCC – you must pick the unit from the drop-down menu associated with the chosen SCC. If you select incorrectly, the system will indicate the correct value after you validate.

Remember to check that your Amount matches the correct units. For example, you may need to express a rate of 72 gallons/hr as 0.072 1000 gallons/hr when you select an SCC code for liquid material depending on the SCC units.

What is the definition of maximum process rate?

The maximum rate is the rate at which the equipment **can operate,** assuming operations 24 hours a day, 7 days a week, irrespective of any regulatory restrictions.

f. If organic material, give weight % of:

- VOC
- HOC
- HYC

Determine the weight percentage separately for each category of organic compound. The MSDS provided by your supplier will list the individual chemicals in the formulation.
Total **weight** percentage of:

Volatile Organic Compounds (VOCs) in the formulation
Halogenated Organic Compounds (HOCs) in the formulation
Hydrocarbons (HYCs) in the formulation

Calculate the weight percentage for each category by summing the weight percent of each individual chemical in the formulation that is in each category.

TIP: The MSDS provided by your supplier will list the individual chemicals in the formulation.

Note: Some formulations will contain a mixture of VOCs, HOCs, and/or HYCs. Others will just contain one of the categories.

What is the weight percentage of VOC, HOC, HYC?

Do not confuse WEIGHT percentage with VOLUME percentage. WEIGHT percentage is calculated as follows: 100 X (The weight of the HOCs, VOCs or HYCs in the formulation) / (the total weight of the formulation).

g. Total actual raw material used or finished product produced for year of record:

- Amount
- Units

How much of the raw material was used or product was produced during the calendar year being reported and the unit of measure used.

Enter "0" if not used/produced in the year of record.
Units will be on the drop-down menu. If the units you use are not listed, call MassDEP.

For previously reported emission units: This information will be provided by the system.

- Amount Prior year –eDEP only
- Units prior year

For new emission units: This information is not applicable.

h. Do you have raw material or finished product restrictions?

Note: Some emission units will not have plan approvals because they are "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03, they are below the threshold for which a plan approval or permit is required, or they were installed before the effective date of the regulation.

What if there are multiple raw material or finished product restrictions?

Cite the most recent raw material use or finished product restriction applicable to the raw material use or finished product associated with this emission unit. The most recent raw material or finished product restriction may be found in a regulation, an approval that applies only to this emission unit, or one that applies to several emission units, or the facility as a whole.

What if a restriction applies to multiple units?

Then list it here and on the forms for each other unit to which it applies.

i. DEP approval number for restrictions:

Only complete if a plan approval is required: State the approval number for the plan approval that allowed the installation of the emission unit. This number is found on the plan approval letter sent by MassDEP.

What if there are multiple raw material or finished product restriction is mentioned in multiple approvals?

Enter the most recent approval number for the restriction .
If a restriction applies to multiple units then enter that same quantity here and on the forms for each other unit to which it applies.

j. Short term raw material/finished product restriction– if none, leave blank:

- Amount:
- Units:
- Per:

Provide the maximum amount of raw material/finished product, you are allowed to use over the short-term period specified in your plan approval. Obtain this from your plan approval letter.

Choose the units of measurement from the drop down list. If your units are not on the drop-down menu, email air.quality@state.ma.us

Check the appropriate box for the time period: Month, Week, Day or Hour.

k. Annual restriction – if none, leave blank:

- Quantity (amount or hours):

Provide the maximum amount of raw material/finished product, you are allowed to use in a year per your permit, and the units of measurement from the drop-down menu. Obtain this from your plan approval letter.

- Units:

If your units are not on the drop-down menu, email air.quality@state.ma.us.

l. Indicate which air pollution control devices from Section A, Question 15 control this material/product by listing the facility-designated control device ID # for each unit that applies:

Select the ID for the APC Equipment from the drop-down menu.
Use the check box if all air pollution control devices on the unit apply to this material/product.

What to do if your new control device does not show up in the drop-down menu?

Validate the form. If you have added or amended the air pollution control device(s) associated with this raw material, you must first validate the form to populate the drop-down menu with the new control device. Once you have successfully validated the form, the added or amended air pollution control device(s) will be in the drop-down menu.

2. Total emissions for this raw material/product – tons per year:

Provide the following information for all pollutants emitted by the emission unit.

What are total emissions for this material/finished product?

This section records the total actual, unrestricted potential and permitted (allowable) emissions for the year covered by this report (the year of record) of each pollutant that is attributed to this raw material or finished product for the emission unit(s) reported on this AP-2. Please see the Appendix C for detailed information on calculating emissions.

PM10	SO2	CO	HOC	NH3
PM2.5	NO2	VOC	Reserved	
Other:	Describe			

Actual for previous year eDEP only:

For electronic filers: This information has been filled in from prior years' source registrations.
For new emissions units: This information is not applicable.

Actual for year of record:

Calculate this information. The actual emissions for the calendar year being reported. **You must calculate your Actual Emissions**. (see Appendix C: Example Calculations.)

Note: In many cases, AP-42/FIRE emission factors found in EPA's website (http://www.epa.gov/ttn/chief/efpac/index.html) can be used to estimate actual emissions.

CAUTION: The AP-42/FIRE emission factors are generic. Therefore they are NOT appropriate for emission units that are subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements. The emissions should be calculated using the RACT or BACT emission factors determined through stack testing or the permitting process because **AP-42/FIRE will overstate emissions**.

What are "actual emissions"?

Actual emissions are an estimate of the total tons of each pollutant emitted by the emission unit during the year covered by the report (the year of record). They are the sum of the emissions associated with each raw material/finished product. For AP-2 forms, eDEP will not auto-calculate the actual emissions. Please see Appendix C for more detailed information on calculating actual emissions.

Unrestricted Potential Emissions

Calculate this information. (See Appendix C: Example Calculations.)

Unrestricted Potential emissions are the maximum uncontrolled emissions assuming you operate 24 hours per day 7 days a week at maximum capacity. The definition of Potential Emissions in 310 CMR

7.00 takes into account the restrictions of a plan source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations. However, the number entered here should not consider restrictions. The restrictions are to be entered on the forms in the next section.

What are unrestricted potential emissions at max capacity uncontrolled?

The emissions resulting from the **maximum operation** of the equipment **irrespective of any regulatory restrictions**. (8760 hrs X Max Firing Rate X Emission Factor)
Note: this is not the limit imposed by any regulation, RES, or approval – please enter such restricted limits under "Maximum allowed emissions" below.

Maximum allowed emissions – annual:

Maximum allowed emissions - short term:

Short term period

Provide this information if there is a plan approval or a regulation for this raw material /product (as opposed to for the emission unit as a whole.)

When to enter maximum allowed emissions?

Complete the "maximum allowed emissions" fields if there is an annual or short-term emission limitation **applicable to the raw material/finished product** expressed **in either a MassDEP approval or a regulation**. Be sure to enter the approval number or regulation under "Basis" data field.

Basis- DEP approval number
or regulation:

Provide either the regulatory citation if the emission unit was installed through a permit by rule or the plan approval number. If a plan approval is not required: Cite the regulation under which the equipment was installed.

Note: Some emission units will not have plan approvals because they are:
1) "Permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03,
2) Below the threshold for which a plan approval or permit is required, or
3) Installed prior to the effective date of the regulation.

If a plan approval is required: Write the approval number for the plan approval that approved the installation of the emission unit/segment. This number is found on the letter sent by MassDEP that informed you that they approved the unit.

Emission factor:

: Provide this information.

Emission factor units in pounds per:

Note: In many cases, AP-42/FIRE emission factors found in EPA's website (http://www.epa.gov/ttn/chief/efpac/index.html) can be used to estimate actual emissions.

What are emission factors?

Emissions factors are the **amount of pollution generated per unit of operation**. For example, for coating operations, the emission factor is often expressed as lb emitted per gallon of coating applied. Therefore, total tons of emissions are obtained by multiplying **[EF in lb/ raw material] x [raw material usage] / [2000 lb per ton] = TPY of emissions.** The EPA emission factors used by eDEP can be found at: http://mass.gov/dep/service/compliance/sr.htm).

Because they are generic, the EPA SCC emission factors are not applicable in all situations. They may overstate emissions for emission units subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements. Appendix C provides more information about using emissions factors to calculate emissions.

T-Butyl Acetate Reporting Requirements

All facilities that use AND EMIT tBAC in process units must now report tBAC emissions SEPARATELY FROM THEIR VOC EMISSIONS on their Source Registrations. **This is a new US EPA requirement.**

Please select t-Butyl Acetate in the "Other" pollutant drop menu and then enter the actual and potential emissions below. Remember to enter the emission factor as well.

If you need to report more then one "Other" pollutants for this unit, please contact MassDEP at air.quality@state.ma.us

3. Ozone season emissions – May 1 through September 30:

a. Typical day VOC emissions – pounds per day

b. Typical day NOx emissions – pounds per day

Ozone season calculation options:
This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at 3.a. and 3.b.

What if I have more than one raw material/finished product?

Note: If you have more than 1 raw material/finished product, **this space on the form is blank** – you will be provided with a space for entering ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your raw materials/finished products for this unit.

Check to enter your own values

Note: The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes

C. NOTES AND ATTACHMENTS

This section is to identify any explanatory material the facility is choosing to submit along with this form.

If the material can be sent electronically, check the box for the appropriate form.
If paper information must be submitted, list the titles of the documents being submitted on the lines provided. and mail them to:

Mr. Robert Boisselle
Department of Environmental Protection, 8th Floor
One Winter Street
Boston, MA 02108

Note: You must click <Validate> now to move on to the next part of the form or to create additional Section B's and then to create Section D: total emissions for emissions unit. The system will force you to make any necessary corrections.

Once you have made all of the required corrections you will be returned to the <Related Forms Transaction ID page>l. To continue your work on this emissions unit, click on the <AQ AP2 Section B (or Section D) form> you see listed under the form, you were just working on.

D. TOTAL EMISSIONS FOR EMISSIONS UNIT

The Actual, Potential, and, if applicable, Permitted emissions from this unit for each listed air contaminant during the calendar year being reported.

1. Total Emissions for this emission unit in tons per year:

Calculations: This form calculates this unit's total actual and maximum potential emissions (using the information you provided for each raw material/finished product in each Section B). Return to Section B if you need to correct those numbers.

What are total emissions for this emission unit?

This form automatically calculates the total actual and maximum potential emissions of each pollutant from this emission unit. It calculates these values from the data you entered for each raw material/finished product.

	Please enter any emission limits that apply to the unit as a whole (regardless of raw material/finished product) under "Allowable" below.
Actual (in Tons) for previous year	For emission units already in the database: This information will be provided by the system. For new emission units: This information is not applicable.
Actual (in Tons) Emissions	The actual emissions for the calendar year being reported. For repeat filers: this information will be provided by the system and is the sum of the emissions from each raw material/finished product (each Section B).
Unrestricted Potential emissions (in Tons) at maximum capacity:	For emissions units already in the database: This information will be calculated by the system and is the maximum unrestricted potential for each raw material/finished product.
Maximum allowed emissions (in Tons) – annual	Maximum annual emissions allowed pursuant to your permit or plan approval. These questions only apply if this entire emission unit is subject to a plan approval or permit that restricts operations or emissions, regardless of raw material. If the restriction is raw material-specific/product-specific, it should be entered in that raw material's/product's Section B.
Maximum allowed emissions (in Tons)) - short term Short term period:	**Note:** Some emission units will not have plan approvals because they are "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03, they are below the threshold for which a plan approval or permit is required, or they were installed prior to the effective date of the regulation.
Basis – DEP approval number or regulation:	If a plan approval is required: write the approval number for the plan approval that approved the installation of the emission unit/segment. This number is found on the letter sent by MassDEP that informed you that they approved the unit. If a plan approval is not required: Cite the regulation under which the equipment was installed that specifies the restriction.
When do I complete the "allowable" emission fields?	Complete the "allowable" field if there is an annual or a short-term **emission limitation applicable to the emission unit as a whole** expressed in either a MassDEP approval or a regulation. Be sure to enter the approval number or regulation under "Basis".
What if a restriction applies to multiple units?	Then list it here and on the forms for each other unit to which it applies. Make a note in Section C that it applies to multiple units and describe the restriction.

2. Ozone season schedule - May 1 through September 30:	Ozone season calculation options:
a. Typical day VOC emissions – pounds per day	This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at 2a. and 2b.
b. Typical day NOx emissions – pounds per day	**Note:** If you have more than one raw material/finished product for this emissions unit, you will be required to complete the ozone season emissions in Section D, after you have entered the throughput and emissions data for each of your raw materials in Section B. The system will calculate this information on the basis of data you supplied on the form.
Check to enter your own values	**Note:** The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes.

BWP AQ AP-3 Emission Unit – Incinerator Instructions

PURPOSE

This form provides MassDEP with information about the equipment, processes, and associated air pollution emissions during the calendar year being reported from the incineration of waste such as solid waste, municipal waste, medical waste, sludge, and other combustible waste materials.

WHEN IS THIS FORM APPLICABLE?

This form applies to all incinerators EXCEPT incineration units used as air pollution control equipment (e.g., flares or thermal oxidizers). Air pollution control equipment should be reported as a control on the emission unit form for the unit that the control is controlling. NOTE that you must report on any idle units with each Source Registration.

NOTE: You do not complete a BWP AP1 for this emission unit.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

One form is required for each incinerator unit, including those that you have added or decommissioned since your last source registration.

CAUTION: FOR FILERS WITH NEW PROCESS EMISSIONS UNITS SINCE THEIR LAST SOURCE REGISTRATION

You must create a new emission's unit form for any new emission unit. If you have not already created the new emissions unit, prior to submitting your complete source registration (when first opening your source registration package), you must either:

1) Under <Related Forms>, open the first form labeled <AQ Source Registration Package>;

- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under <Related Forms>, select <New APForm Creator>;
- Choose the appropriate form and enter the number of new units;
- Validate the form;
- Follow subsequent instructions.

----or----

2) You must create a new eDEP partial AQ Source Registration package for that emission unit. Once you have submitted the package you are working on:

- Return to "Start New";
- Select "AQ Source Registration Package";
- In SR Overview Form: B.1: Amend a Source Registration;
- Select "Check here to add new units";
- Follow subsequent instructions.

CAUTION: If you realize in the midst of filling out this package that you need to create additional forms, DO NOT return to this Overview form UNLESS you are willing to revalidate each previously validated form. Revalidation requires that you must open and revalidate every form in the package – you don't lose any of the data you have entered, but the process can be time consuming, particularly for a facility with more than 5-10 units.

The best way to add emission units or stacks AFTER you have completed much of your package may be by submitting a supplemental package (Option 2 above).

CAUTION: REGARDING THE ORDER IN WHICH YOU COMPLETE YOUR FORMS

If this unit's emissions release point is new: you must have created and completed a BWP AQ AP-Stack form for that new stack prior to filling out this form. The drop down-menu (A.19) will not contain the new stack and you will be unable to validate this form and will be forced to save your work, exit, and return to it to complete it after you have completed and validated the new stack form.

A. EMISSION UNIT—INCINERATOR INFORMATION

NOTE: In general the information requested below will be pre-populated from MassDEP's electronic database. However, certain data submitted to MassDEP on paper AP forms was not historically stored electronically. That data will not appear on the electronic forms until it has been submitted electronically.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

!TIP: If you obtained a plan approval for the emission unit(s) you are reporting you will have received two documents from MassDEP: a plan approval letter and a copy of the permit application that you submitted to MassDEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

1. Facility Identifiers a. Facility Name b. DEP Account number c. Facility AQ Identifier -SSEIS ID	The name and identifying numbers of the facility or plant that is reporting. This will be pre-populated from the information on your BWP AQ SP-SR Form. **NOTE:** You cannot change the facility name on this form. To change the facility name you must contact your MassDEP Regional Office FMF Data Manager.
How does the new emission unit numbering system compare to the Side-by-Side system?	On the old Side-by-Side form, individual "emission units" were called "points". The DEP number (A.3.c) below is the point number from the old forms. Points were assigned to "stacks" whether there existed an actual stack or not. The new system is organized around the emission units (points). A stack is only assigned to a point if it is an actual vertical stack (such stacks keep their old stack number). eDEP allows you to change the name (A.3.a) and give your own number (A.3.b) to each emission unit. MassDEP keeps track of the units by the DEP number (A.3.c), and therefore you cannot change it.
2. Emission Unit Identifiers a. Facility's choice of emission unit name	If this is a new Emission Unit: Assign the emission unit a name/number in order to uniquely identify it. If this is an existing Emission Unit: Assign or change the emission unit name/number in order to uniquely identify it. A unique name of your choice that will allow you to recognize this unit on future reports.
b. Facility's emission unit number / code	A unique number or code of your choice that will allow you to recognize this unit on future reports. *Example: Incinerator #1* For a previously reported emission unit: The information will be pre-populated.
How is a flare reported?	When a flare is a control device for a process emission unit, is should be reported as such on the AP-2 Form for that process unit. If this unit was previously reported as an incinerator on an AP-3 Form, please do the following: 1) report the flare on the AP-2 Process Unit Form that it controls, 2) note in the Notes Section on the AP-2 Form that you are reporting the on the AP-2 Form rather than the AP-3 Form, and 3) enter a decommission date in the AP-3 Form (causing it to be removed in future submittals) and enter 0 for all throughputs and emissions. EXCEPTION: Flares at landfills should be reported on an AP-1 Form.
c. DEP emissions unit # - SSEIS point #	If this is a new Emissions Unit Leave blank – MassDEP will assign this number (locked field). If this is an existing Emissions Unit, the information will be pre-populated for existing emissions units. A unique number assigned by MassDEP that allows MassDEP to recognize the unit on future reports
3. DEP Air Quality Approvals	Write the number for the plan approval that allowed the installation of the incinerator. This number is found on the letter sent by MassDEP that informed you that they approved the unit.

What if the emission unit has more than one DEP approval?

Cite the most recent plan approval that includes specific requirements applicable to this emission unit. Do not cite an approval that sets a general requirement for the facility as a whole, unless it also establishes specific conditions for this emission unit. Approvals that apply facility-wide are cited on the AP-TES form. Similarly do not cite your most recent Air Operating Permit if you have one unless a more stringent limit is established in the operating permit for the emission unit. Usually the Air Operating Permit is a compilation of requirements included in other plan approvals or applicable regulations.

NOTE: A particular plan approval may be cited more than once in the package or on a form. For example, a plan approval that includes specific requirements for more than one emission unit will be cited on the AP form for each emission unit it covers. Similarly if a plan approval specifies conditions for the emission unit and for the monitor, raw material, fuel, and/or air pollution control device it will be cited on each applicable question on the emission unit form.

a. Most recent approval number

Most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") number applicable to this unit, from MassDEP plan approval letter.

b. DEP approval date (mm/dd/yyyy)

Date of most recent plan approval or emission control plan or restricted emission status (excluding the facility's "Air Operating Permit") applicable to this unit, from MassDEP plan approval letter.

4. Emission unit installation and decommission dates

Provide the requested dates in the appropriate lines. If the unit was installed many years ago and you do not know the exact date, use your best approximation.

a. Installation dates – estimate if unknown (mm/dd/yyyy)

b. Decommission dates – If applicable (mm/dd/yyyy)

Complete only if the unit was shutdown permanently or replaced any time before December 31st of the year of record

How / when to delete a unit?

Note: If you decommissioned a unit prior to the year of record (and you are decommissioning it in this package) you must enter zero for the maximum hourly fuel rate, annual fuel usage, actual emissions, and potential emissions. Failing to enter zeros will cause the form to add non-zero potential emissions to the facility wide PTE on the AP-TES.

Enter a decommission date in A.6.b if the unit is being **permanently taken out of service**. If the decommissioned unit operated in the year of record, the emissions from that unit must be included in this Source Registration Package. Therefore units "decommissioned" in this package will remain on the list of emission units for this year of record. They will NOT appear on the NEXT source registration package overview form however.

5. Emission unit replacement

a. Is this unit replacing another emission unit?	Check the appropriate box, yes or no. If Yes, then complete Question A.5.b, otherwise continue to Question A6.
b. DEP's emission unit number and facility's unit name	: Choose from the drop-down menu.
How to be sure the unit being replaced appears in this menu?	Line A.5.b. "DEP's emission unit number and facility's name for emission unit" are mandatory fields when the "yes" box is checked. However the unit being replaced **will not appear as a choice** on the drop-down menu **until it is decommissioned**. You will not be able to complete and validate the AP form for a replacement unit until you have first entered a decommission date and completed and validated the AP-3 form for the unit it is replacing. If this unit is replacing another unit that has not been "decommissioned", you must 1) save and exit this form, 2) open the AP-3 form for the unit being replaced, 3) enter the decommission date, 4) complete and validate the form before you can complete this AP-3 Form.
What if one emission unit is replacing more than one unit?	If one new emission unit is replacing several units, pick one of the units being replaced from the drop-down menu and note the others in Section C Notes and Attachments
6. Are there routine air quality reporting requirements for this emission unit (other than Source Registration)?	Check the appropriate boxes to report on the existence of any reporting requirements other than source registration for this emissions unit and the frequency of that reporting.
a. Are there other routine air quality reporting requirements for this emission unit?	If yes, specify reporting frequency in 6.b. If no, skip to Question 7.
b. Reporting frequency – check all that apply:	Monthly, Quarterly, Semi-annual, Annual, RES (Include Operating Permit and Plan Approval reports, but not exceedance reporting)

7. Incinerator description:

a. Type:	Check the appropriate box for the type of combustion equipment: Commercial Industrial Medical Municipal Sludge Other: Specify "other" incinerator type
b. Manufacturer	Firm that built the unit, information can be usually found on metal nameplate on unit. Do not leave blank: enter unknown if unknown. Provide the requested information for the incinerator.
c. Model number	Information can be found on metal nameplate on unit. Do not leave blank: enter unknown if unknown Provide the requested information for the incinerator

d. Maximum operating capacity:	Maximum rated capacity regardless of permit limitations, information can be found on metal nameplate on unit. Do not leave blank: estimate if unknown
• Amount • In units of: pounds OR tons of waste per hour	Enter the maximum rated capacity regardless of permit limitations. Do not leave blank: estimate if unknown. **Tip:** The manufacturer's maximum input rating may be located on a metal nameplate on the unit. .
e. Pounds of steam per hour	Required if 7a (incinerator type) equals Municipal or Sludge.
f. MMBtu per hour	Enter the approximate MMBtu per hour of the waste stream to the incinerator. The waste stream includes the fuel and the material being incinerated.
WHAT TO DO IF DATA IS UNKNOWN OR NOT AVAILABLE?	Do not leave blank: if date or numeric field – estimate; for other fields enter UNKNOWN if unknown.
8. Waste type – select one:	Type 0 Waste – dry rubbish, trash Type 1 Waste – rubbish Type 2 Waste – mix of rubbish & garbage Type 3 Waste – garbage Type 4 Waste – infectious/medical waste Type 5 Waste – industrial (liquid) Type 6 Waste – industrial (solid) Other: (Specify Other Waste Type)
9. Source Classification Code (SCC)	The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-42 (http://www.epa.gov/ttn/chief/codes/) contains the codes for each type of process, as well as, emission factors that can, in certain circumstances, be used to calculate emissions from each unit The system will automatically fill in the code description when the form is validated.
How does eDEP use source classification codes (SCC)?	On an AP-1, the SCC you select will be used to supply the emission factors for the automatic emissions calculation feature included in the eDEP system. On the other forms, the SCC is used as an inventory tool. The list of SCC valid in eDEP can be found at: http://www.epa.gov/ttn/chief/codes/. If the form will not validate because of the SCC, contact MassDEP at air.quality@state.ma.us.
10. Amount of material (in Tons) incinerated in year of record: • For year of record	The amount of material incinerated in this emission unit during the calendar year being reported. Enter "0" if no material incinerated in the year of record.
• In previous year eDEP only	For existing emission units in the database: This information will be provided by the system. For new emission units: This information is not applicable.
11. Charging rate restriction (for batch units only):	If the facility is a batch unit and it has a restriction imposed through a plan approval, enter the maximum charging rate per hour and the units.
12. Heat recovery:	Check yes if the incinerator engages in this practice, no if not.

13. Number of hearths:	Enter the total number of hearths for this emissions unit.
14. Total hearth area: (in square feet)	Total Square Feet of all the hearths in this emission unit.
15. Automatic feeder?	Check yes if the incinerator has this equipment, no if it does not.
16. Hours of operation for the emission unit:	Report on typical operation.
a. Check if typically continuously operated - 24 x 7 x 52	
b. Number of hours per day	Typical operation Acceptable range: 0-24
c. Number of days per week	Typical operation Acceptable range: 0-7
d. Number of weeks per year	Actual operation Acceptable range: 0-52
e. Percent of time emissions unit is operated each calendar quarter: Sum of Q1+Q2=Q3+Q4 must = 100% (or 0%, if the unit was not operational for any quarter).	Actual percent of total annual operations that occurred in each season (e.g. 40% in Q1, 30% in Q2, 20% in Q3 and 10% in Q4) unit operated Q1 is January – March Q2 is April –June Q3 is July – September Q4 is October - December
17. Ozone season schedule – May 1 through September 30:	Actual operation during this period.
a. Ozone season hours per day	Typical operation Acceptable range: 0-24
b. Ozone seasons days per week	Typical operation Acceptable range: 0-7
c. Weeks operated in ozone season	Typical operation Acceptable range: 0-22
18. Emissions release point	Select the appropriate type of stack or release point Non-Stack Release Points: -Fugitive -Gooseneck -Horizontal -Downward facing vent Physical Stacks -Vertical -Vertical with rain cap/sleeve

What is a release point? What is the difference between stacks and non-stacks?

The Emission Release Point is the physical structure through which the emissions leave the facility and reach the ambient air. In the previous data system, ALL release points including downward facing and horizontal vents, goosenecks, and fugitive releases were considered "stacks". In the new database, **only vertical release points are considered "stacks**" with assigned DEP and Facility stack numbers and an AP-STACK form.

If the unit has a physical stack, you must link the unit to that stack in question A.19.

NOTE: If you have installed a new stack, it will not populate the dropdown unless you first complete and validate an AP-STACK form prior to opening this AP-3. To complete the AP-STACK form, "SAVE AND EXIT" this AP-3 form,. Open, complete, and validate the AP-STACK form for the new stack, and then return to this form.

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19. Link this unit to a physical stack (if applicable) - Pick from the list below.

Facility's stack identifier from Stack form – to change stack name use the Stack form.
If the stack for this unit is not listed, save and exit this form now and complete a new Stack form **before** completing this form.

CAUTION:

- If the emission release point in Question #18 is vertical or vertical rain cap/sleeve, then this is a required field.
- If this unit's emissions release point is a new stack, you must have created and completed a BWP AQ AP-Stack form for that new stack, prior to filling out this form. If you do not, the drop down-menu will not have the stack #, and you will be unable to validate this form; and will be forced to save and exit the form. Once you have created, completed, and validated the new stack form, then you may return to complete the AP-3 form.

20. Temperature - degrees in Fahrenheit

Put the actual and permitted maximum operating temperature on the "Upper" lines and the minimum operating and permitted temperature on the "Lower" lines for both the primary and secondary chambers.

	Primary Chamber		Secondary Chamber	
a. Operating range:	Lower	Upper	Lower	Upper
b. Permitted range:	Lower	Upper	Lower	Upper

21. Retention time in seconds

Put the actual and permitted maximum operating retention times in seconds on the "Upper" lines and the minimum operating and permitted retention times on the "Lower" lines for both the primary and secondary chambers.

	Secondary Chamber	
a. Operating range:	Lower	Upper
b. Permitted range:	Lower	Upper

22 -23. Primary chamber auxiliary burner and Secondary chamber auxiliary burner (if applicable)

These instructions apply to Question 22 and Question 23.

If there are no secondary chamber auxiliary burners, check the "No" box under Question 23 and skip to Question 24.

a. Type of burner – check one:

Check the appropriate box, provide a description if other.

	Rotary	Mech. Atomizer	Steam atomizer
	Air atomizer	Traveling grate	Hand fired
	Other: specify "other" burner type.		

b. Burner manufacturer

c. Burner model number

d. Maximum rating **MMBtu/hr**

Provide the requested information for the burners.

e. Source Classification Code (SCC)

The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-42 (http://www.epa.gov/ttn/chief/codes/) contains the codes for each type of process, as well as, emission factors that can, in certain circumstances, be used to calculate emissions from each unit.
: The system will automatically fill in the code description when the form is validated.

f. Type of fuel – check one:

Check the box for the type of fuel burned in this unit:

No. 2,	No. 4,	No. 6,
Diesel	Natural gas	Other: Describe

g. Sulfur content for oils (0-2.2):

The percentage of sulfur by weight in these fuel type.
.**TIP:** This is determined by analysis of a fuel sample or can be found on the receipt from your fuel dealer.

h. Maximum hourly fuel rate for all firing burners:

The maximum fuel that all burners in this emission unit can fire in one hour, and the units of measurement from the drop-down menu (*e.g., gallons per hour, tons per hour, million cubic feet per hour, etc.)*

- Amount
- Units per hour

If your units are not on the drop-down menu, email air.quality@state.ma.us
Units must match the SCC – you must pick the unit from the drop menu associated with the chosen SCC. If you select incorrectly, the system will indicate the correct value after you validate. Remember to check that your Amount matches the correct units. For example, you may need to express a firing rate of 72 gallons/hr as 0.072 1000 gallons/hr when you select an SCC code for liquid fuel.

i. Total actual fuel used for year of record:

- Amount –year of record
- Units
- Total annual usage for prior year of record – eDEP o**nly**

The amount of fuel used in this emission unit during the calendar year being reported, and the units of measurement from a drop-down menu. Enter "0" if fuel not used in the year of record.

If your units are not on the drop-down menu, email air.quality@state.ma.us

For emission units in the database: This information will be provided by the system.
For new emission units: This information is not applicable.

j. Do you have fuel or usage restrictions?

These would have been expressed in the plan approval you received from MassDEP for this emission unit. Check the appropriate yes or no box. If No, then skip to Question 23.

If the same restrictions also apply to other emission units, report the restrictions on those emission unit forms, as well.

Cite the most recent fuel use restriction applicable to the fuel as it is used in this emission unit. The most recent fuel use restriction may be found in a regulation, an approval that applies only to this emission unit, or one that applies to several emission units, or the facility as a whole.

k. DEP approval number for fuel restrictions: most recent for this fuel.

Obtain this from your plan approval letter.

Cite either plan approval or regulation that describes the restriction.

What if the restriction is mentioned in multiple approvals?

Enter the most recent approval number for the restriction.

l. Annual usage restriction for this fuel:

quantity
units

Provide the maximum amount of fuel you are allowed to use in a year per your permit, and the units of measurement from the drop-down list. Obtain this from your plan approval letter.

If your units are not on the drop-down menu email air.quality@state.ma.us

What if the restriction is mentioned in multiple approvals?

Enter that same quantity here and on the forms for each other unit to which it applies.

m. Short term fuel usage restriction for this fuel:

- Quantity:
- Units:
- Per:

Provide the maximum amount of fuel, you are allowed to use over the short-term period specified in your plan approval. Obtain this from your plan approval letter.

Choose the units of measurement from the drop-down menu. If your units are not on the drop-down menu, email air.quality@state.ma.us

Check the appropriate box for the time period: Month, Week, Day or Hour.

24. Are there air pollution control devices on this emissions unit?

Check the appropriate yes or no box. If no, skip to question 25.

If yes, answer a through i for each piece of air pollution control equipment associated with the emissions unit in a separate column.

NOTE: If other emissions units use the same air pollution control equipment, also report this information on the appropriate BWP AQ AP-1, AP-2 or AP-3 forms for those units. If you have more than three control devices, checking the box in the top right will lead you through the process of creating additional forms.

Note: In order to create and access the new air pollution control device forms, you will have to:

1.Click on <Validate> to enter the data you have provided on this form up to this point into the system. The system will force you to correct any errors before it will create the new <AP3-APC form>. (Which will return you to the <Related Forms – Transactions ID page>)

2. Click on, complete, and validate the new <AP-3 APC form> (which will return you to the <Related Forms – Transactions ID page>)

3. Re-open and finish this AP-3 form.

How to delete or replace an air pollution control device?

Delete an air pollution control device (APC) by entering a date in Decommission Date (A.14.h). Use this when you are removing the device permanently.

To replace a device: if the APC device was replaced in kind with a new model, enter the new installation date and replace the information on lines a-l, as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the APC equipment automatically.

a – d. Air pollution control device (description)

a. Type (Use The Drop-down menu)
b, Manufacturer
c. Model Number
d. Facility's ID For This Device

What to do if you don't know the date?

Provide your best approximation of the date if you do not know it.
Do not leave blank.

e – h. Air pollution control equipment dates and approval numbers:

e. Installation date (mm/dd/yyyy) — If unknown enter your best approximation.
f. DEP approval number (most recent)
g. DEP approval date (mm/dd/yyyy)

Note: Not all air pollution control devices require plan approvals.

h. Decommission date (mm/dd/yyyy)
Enter a date here if you are permanently removing the control device.

i. Percent overall efficiency – enter for all pollutants that the device was designed to control:

The *Percent Overall Efficiency* is equal to the APC equipment's Capture Efficiency (the percentage of the emissions that reach the air pollution control unit) multiplied by the APC equipment's *Control Efficiency* (the percentage of the emissions that are removed from the air stream by the Air Pollution Control Equipment.)

- If you have stack-testing data on control efficiency: Use that information.
- If you do not have stack-testing data: Use the manufacturer's suggested control efficiency. This is usually expressed as a range of percentages (e.g., 90%-97%). Use the upper end of the range.

What is the % overall efficiency?

The % overall efficiency for a device equals its ("% capture efficiency" X "% control efficiency"). This information can be found in the plan approval application, MassDEP's approval for the device and/or in the manufacturer's specification for the device.

PM 10	VOC	HYC
PM 2.5	NO2	Hg
SO2	NH3	Pb
CO	HOC	

Other: List any substances not already listed on the form that you are required to control per your plan approval, operating permit, or applicable regulation. Only one "Other" is available for each APC device.

25. Is there monitoring equipment on this emissions unit?

Answer Yes or No, as appropriate. If no, skip to Section B. Emissions

NOTE: Report each monitor that is on the release point for this emissions unit in the separate columns provided.

NOTE: If other emissions units use the same release point, also report this information on the BWP AQ AP-1, AP-2 or AP-3 forms for those units.

How to delete a monitor?

Delete a monitor by entering a date in Decommission Date (A.25.h). Use this when you are removing the monitor permanently.

How to replace a monitor?

If the monitor was replaced in kind with a new model, enter the new installation date and replace the information on lines b-i as necessary. Do not enter a "decommission date"– the MassDEP database tracks the change to the monitor equipment automatically.

a. Monitor type:

Check the appropriate box for the type of monitoring device. Check only one for each monitor (use another column if there are other types of monitors on the release point.)

CEMS,	Time recorder	Other - If other is checked then Describe "other"
Opacity	Temperature recorder	is required
Fuel flow meter	Pressure	

b. Manufacturer:
c. Model number:

The name of the manufacturer of the monitoring equipment attached to the stack and the model number assigned by the manufacturer.

d. Monitor ID #: The unique ID that the owner/operator of the facility has assigned to the monitoring device.

e. Installation date: Enter the installation date. Do not leave blank. Estimate if unknown.

f. DEP approval #: From your permit or plan approval.

g. DEP approval date: (mm/dd/yyyy)

h. Decommission date: Enter a date here if you have permanently removed the monitor.

i. Recorder?

j. Audible alarm? Whether or not this device is attached to the monitor.

k. Data System? Whether or not a data system that continuously logs monitoring data for future review is attached to the monitor.

What is a "data system"? A data system continuously captures monitoring data for future review and analysis.

l. Monitored pollutants

Check the contaminants that are monitored by the monitoring device:

PM 10	VOC	Oxygen	Opacity
PM 2.5	NO2	CO2	
SO2	NH3	H2S	
CO	Mercury	HCL	

Other List any substances not already listed on the form that you are required to monitor per your plan approval, operating permit, or applicable regulation.

B. EMISSIONS

Note: Hazardous Air Pollutant Emissions (Cadmium, Mercury or other substances) only need to be reported on the TES form. They do not need to be reported at the emission unit level.

1. Total emissions for this emissions unit - tons per year: The Actual, Potential, and, if applicable, Permitted emissions from this unit for each listed air contaminant during the calendar year being reported.

What are total emissions for this emission unit? Calculate the total emissions for the incinerator unit (includes emissions from the waste itself as well as fuels for primary and secondary chambers). Please see Appendix C for example emission calculations.

Please enter any emission limits that apply to the unit as a whole under "Permitted" below.

Actual (in Tons) for previous year For existing emission units in the database: This information will be provided by the system.
For new emission units: This information is not applicable.

Actual (in Tons) for Year of Record The actual emissions for the calendar year being reported; Calculate this information.

Unrestricted Potential emissions at maximum capacity:	Calculate this information. Please see Appendix C: Example Calculations. Unrestricted Potential emissions are the maximum uncontrolled emissions assuming you operate 24 hours per day 7 days a week at maximum capacity. The definition of Potential Emissions in 310 CMR 7.00 takes into account the restrictions of a plan source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations. However, the number entered here should not consider restrictions. The restrictions are to be entered on the forms in the next section. CAUTION: Pay close attention to the "potential emissions" calculations, because potential emissions help to define the regulatory requirements to which your facility is subject.
Maximum allowed emissions (in Tons)) – annual	Maximum annual emissions allowed pursuant to your permit or plan approval. These questions only apply if this entire emission unit is subject to a plan approval or permit that restricts operations or emissions.
Maximum allowed emissions (in Tons) - short term	**Note:** Some emission units will not have plan approvals because they are "permitted by rule" – installed in accordance with the provisions of 310 CMR 7.03, they are below the threshold for which a plan approval or permit is required, or they were installed prior to the effective date of the regulation.
Short term period:	
Basis – DEP approval number or regulation:	If a plan approval is required: write the approval number for the plan approval that approved the installation of the emission unit/segment. This number is found on the letter sent by MassDEP that informed you that they approved the unit. If a plan approval is not required: Cite the regulation under which the equipment was installed.
Emission factor	Provide this information.
Emission factor units in pounds per unit:	**Note:** In many cases, AP-42/FIRE emission factors found in EPA's website (http://www.epa.gov/ttn/chief/efpac/index.html) can be used to estimate actual emissions.
What are emission factors?	Emissions factors are the **amount of pollution generated per unit of operation**. For fuels, total tons of emissions are obtained by multiplying [**EF in #/fuel unit] x [fuel usage] / [2000 lb per ton**] **= TPY of emissions**. The EPA emission factors used by eDEP can be found at: http://mass.gov/dep/service/compliance/sr.htm under Reference Links at the center of the page. Because they are generic, the EPA SCC emission factors are not applicable in all situations. They may overstate emissions for facilities subject to certain BACT (Best Available Control Technology) requirements or RACT (Reasonably Available Control Technology) requirements. Appendix C provides more information about using emissions factors to calculate emissions.

2. Ozone season emissions – May 1 through September 30:	Ozone season calculation options: This form automatically calculates an estimate of the ozone season emissions for this emission unit using the data you provided on ozone season operation and some simplifying assumptions. If you wish to report a more precise value based on your own calculations and data, check the box below the blank lines at 2.a. and 2.b.
a. Typical day VOC emissions – pounds per day	
b. Typical day NOx emissions – pounds per day	
Check to enter your own values	**NOTE:** The form will estimate the ozone season emissions for you. However, you may enter your own values by checking the boxes.

C. NOTES AND ATTACHMENTS

This section is to identify any explanatory material the facility is choosing to submit along with this form.

If the material can be sent electronically, check the box for the appropriate form.

If paper information must be submitted, list the titles of the documents being submitted on the lines provided and mail them to:

Mr. Robert Boisselle
Department of Environmental Protection, 8th Floor
One Winter Street
Boston, MA 02108

BWP AQ AP-4 Emission Unit – Organic Material Storage Instructions

PURPOSE

This form summarizes the equipment used and the organic materials stored or transferred for the calendar year being reported.

WHEN IS THIS FORM APPLICABLE?

This form applies if you store at your facility organic material in any below- or above-ground storage container that is 500 gallons or larger.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

One form must be completed for each above or under ground storage container containing "Organic Material" with a capacity equal to or greater than 500 gallons.

When does a tank need to be reported

You must complete an AP-4 Form for each tank with a capacity equal to or greater than 500 gallons; however, tanks may be combined if the combined capacity of the tanks does not exceed 50,000 gallons, they are of the same construction, and store the same material. Therefore, you cannot combine aboveground storage tanks (ASTs) with underground storage tanks (USTs). Combined ASTs require a separate AP-4 Form from USTs.

Do waste tanks need to be reported.

For the majority of waste tanks, these tanks do not need to be reported. It is not the intent of the Source Registration program to capture wastewater that may contain some organic material or waste tanks that contain some oil that will be disposed/treated off-site. However, waste tanks containing organic material that will be used as feed stock for a process or alternate fuel for a combustion unit must be reported on an AP-4 Form.

Do I need to report emissions from tanks (breathing/standing, drawdown, and transfer losses)

If a single tank is equal to or greater than 40,000 gallons, then it will necessary to report the tanks emissions (breathing losses and transfer losses) if the vapor pressure is 1.5 psia or greater. It is also required to report tank emissions from all tanks with a capacity equal to or greater than 1 million gallons. The emissions from these tanks must be reported on AP-2. The emissions from tanks can be reported as an additional segment on the AP-2 Form that reports the emissions resulting from the transfer operations (tank loading equipment). Report breathing/standing losses separately from drawdown losses (separate segments). All tank losses can be reported combined (as one segment for breathing loss and one segment for drawdown loss) or each tank can be reported individually for clarity. Provide the TANKS model input parameters in the notes or as an attachment.

How do I report lube oil tanks?

Lube oil tanks, whether they are part of a closed loop system (which incorporates a lube oil waste tank) or not, do not have to be reported as part of the Source Registration.

CAUTION FOR FILERS WITH NEW STORAGE TANKS SINCE THEIR LAST SOURCE REGISTRATION

You must create a new emissions unit form for any new emission unit. If you have not already created the new emissions unit, prior to submitting your complete source registration (when first opening your source registration package), you must either:

1) Under <Related Forms>, open the first form labeled <AQ Source Registration Package>;

- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under <Related Forms>, select <New APForm Creator>;
- Choose the appropriate form and enter the number of new units;
- Validate the form;
- Follow subsequent instructions.

----Or----

2) You must create a new eDEP partial AQ Source Registration package for that emission unit. Once you have submitted the package you are working on:

- Return to "Start New";
- Select "AQ Source Registration Package";
- In SR Overview Form: B.1: Amend a Source Registration;
- Select "Check here to add new units";
- Follow subsequent instructions.

CAUTION: If you realize in the midst of filling out this package that you need to create additional forms, DO NOT return to the Overview form UNLESS you are willing to revalidate each previously validated form. Revalidation requires that you must open and revalidate every form in the package – you don't lose any of the data you have entered, but the process can be time consuming, particularly for a facility with more than 5-10 units.

The best way to add emission units or stacks AFTER you have completed much of your package may be by submitting a supplemental package (Option 2 above).

A. EQUIPMENT DESCRIPTION

If you obtained a plan approval for the emission unit(s) you are reporting, you will have received two documents from MassDEP: a plan approval letter and a copy of the permit application that you submitted to MassDEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

1. Facility Identifiers

The name and identifying numbers of the facility or plant that is reporting.

a. Facility Name

b. DEP Account number

c. Facility AQ Identifier – SSEIS ID

These will be pre-populated from the information on your BWP AQ AP-SR form.

2. Emission Unit Identifiers

If this is a new Emission Unit: Assign the emission unit a name/number in order to uniquely identify it.
If this is an existing Emission Unit: Assign or change the emission unit name/number in order to uniquely identify it.

a. Facility's choice of emission unit name

Your choice of unique name for this tank; Example: Methyl Ethyl Ketone Tank #1.

b. Facility's emission unit number / code

Your choice of unique number for this tank

For an existing emissions unit: The information will be pre-populated, but you can change it.

How the new system

On the old Side-by-Side form, individual "emission units" were called "points". The DEP number (2.c) is the point number from the old forms. Points were assigned to "stacks" whether there existed an actual stack or

relates to the old SSEIS stack-point-segment numbering?	not. The new system is organized around the emission units (points). Stacks are only assigned to a point if it is an actual vertical stack (such stacks keep their old stack number). eDEP allows you to change the name (2.a) and give your own number (2.b) to each tank. MassDEP keeps track of the units by the DEP number (2.c), and therefore you cannot change MassDEP number.
c. DEP emissions unit # - SSEIS point #	This number is a unique number assigned by MassDEP that allows MassDEP to recognize the unit on future reports. If this is a new Emissions Unit the field is blank and locked – MassDEP will assign this number. If this is an existing Emissions Unit, the information will be pre-populated.
d. Combined Units – enter number of individual units	Enter total number of individual units combined on this AP-4.
What is a combined unit?	Storage containers can be combined into one unit for the purpose of Source Registration. Tanks can be combined if the combined capacity does not exceed 50,000 gallons, they are the same construction, and store the same material(s). Do not combine above ground with below ground tanks – use separate AP4 forms for each type. Note that if a single tank is 40,000 gallons or larger, you may need to report emissions for the tank – see question below. Tanks containing wastewater with organic material and waste organic material that will be disposed of off-site need not be reported in Source Registration.
3. Emission unit installation and decommission dates	
a. Installation date – estimate if unknown (mm/dd/yyyy**)**	Provide the requested dates in the appropriate lines. If the unit was installed many years ago and you do not know the exact date, use your best approximation.
b. Decommission date (mm/dd/yyyy) – if applicable	Date the tank was taken permanently out of service. Complete only if the unit was shut down permanently or replaced since the last report. Enter a decommission date in 3.b if the tank is being permanently taken out of service. If the decommissioned tank operated in the year of record, the throughput from that unit must be included in this AP-4 form. Therefore units "decommissioned" in this package will remain on the list of emission units reporting for this year of record. They will NOT appear on the NEXT source registration package, however.
How / when to delete a unit?	**NOTE**: If this form tracks combined storage tanks, enter a Decommission Date ONLY when ALL of the storage tanks have been removed. If only a portion of the tanks have been removed, then just adjust the number in the Combined tanks field to reflect the current number of tanks.
4. Emission unit replacement	
a. Is this unit replacing another emission unit?	Check the appropriate box, yes or no. If Yes – choose DEP's emission unit number for the unit being replaced from the drop-down menu.
b. DEP's emission unit number and facility unit name	**CAUTION**: This is a required field. However, the unit being replaced will not appear as a choice on the drop-down menu until it is decommissioned. See next topic.

How to be sure the unit being replaced appears in this menu?

Line A.4.b. " DEP's emission unit number and facility's name for emission unit" are mandatory fields when the "yes" box is checked. However, the unit being replaced will not appear as a choice on the drop-down menu until it is decommissioned. You will not be able to complete and validate the AP form for a replacement unit until you have first entered a decommission date and completed and validated the AP form for the unit it is replacing. If this unit is replacing another unit that has NOT been "decommissioned", you must:

4) Save and exit this form,
5) Open the AP-4 form for the unit being replaced,
6) Enter the decommission date,
7) Complete and validate the form,
8) Return to and complete this AP-4 Form.

What if one emission unit is replacing more than one unit?

If one new tank is replacing several tanks, pick one of the units being replaced on the drop-down menu and note the others in Section B Notes and Attachments.

5. Unit descriptions

Check the appropriate boxes, if other, describe.

a. Description

Above ground | Below ground

b. Roof type

Floating roof | Internal roof fixed

Fixed | Other - specify

c. Height – feet
d. Diameter – feet
e. Capacity – gallons

Enter tank dimensions in appropriate units.

How to report on combined units?

If this is a combined unit, report the combined capacity of all of the tanks in Question 5e, and the total throughput for all the tanks in Questions 7g and 8g (if more than one liquid was stored). Enter the most common height and diameter in questions 7c and d and most common construction type in Question 8.

Note: In the comment section of the form, include the locations of the combined units if they are not in the same building at the facility.

6. Construction:

Check the appropriate boxes:

Steel weld | Other weld | Rivet | Fiberglass | Gunite

7 – 8. Material stored and New material stored (enter new material if contents changed during year of record):

a. Name of material
b. CAS number if single chemical

Write the name of the chemical or formulation. If it is a chemical, write the CAS number. This can be found on the MSDS for the material.

c. SC code for standing / breathing loss
d. SCC description –

The SCC is an EPA code for the type of unit operation or production process or fuel. EPA's AP-4 (http://www.epa.gov/ttn/chief/codes/) contains the codes for each type of process as well as emission factors that can, in certain circumstances, be used to calculate emissions from each unit

The system will automatically fill in the code description.

Where do you find Source Classification Codes (SCC)?	SC codes are standard codes EPA uses to identify different operations and the associated emissions factors. The list of SCC valid in eDEP can be found at http://www.epa.gov/ttn/chief/codes/ . If the SCC code listed on the form **is wrong**, enter the correct code. If the form will **not accept the SCC** you are entering, contact MassDEP at air.quality@state.ma.us.
e. Vapor pressure PSI at 25 C	This information can be found on the MSDS for the material. Vapor Pressure is listed on MSDS (at 25 C if possible, otherwise make note in Section B of the temperature at which the vapor pressure is reported.)
f. Temperature - ºFahrenheit	Average Storage Temperature
What do I enter for temperature?	This field is intended to report the temperature at which the material is stored. If the tank is an underground tank, a default value of 55ºF may be used if the tank is not heated or cooled. If the tank is an aboveground tank, a default vale of 48ºF may be used if the tank is not heated or cooled. If the tank is inside a building, then the temperature at which the build is kept should be reported. Finally, if the tank is heated or cooled,the temperature of the contents should be reported.
g. Annual throughput in gallons	Total amount of the material added to the storage container during the calendar year being reported, and the units of measurement.
h. RVP – gasoline only	Enter the Reid Vapor Pressure (RVP)
i. Total oxygen content in gallons - gasoline only	Only provide this information for gasoline. Obtain this from the MSDS.
j. Oxygenate name – gasoline only	Only provide this information for gasoline. Obtain this from the MSDS.
How do I report blends of gasoline?	If tank holds 2 blends of gasoline, enter RVP, oxygen content, and oxygenate data for one constituent in question 7 and the information for the other constituent blend in Question 8.
What if there are more than 2 contents during the year?	If there are more than 2 contents in a single reporting year, then report the 2 largest in Question 7 & 8. Give the substances and throughputs for the others in the Notes field in Section B.

B. NOTES AND ATTACHMENTS

This section is to identify any explanatory material the facility is choosing to submit along with this form.

If the material can be sent electronically, check the box for the appropriate form.

If paper information must be submitted, list the titles of the documents being submitted on the lines provided and mail to:

Mr. Robert Boisselle
Department of Environmental Protection, 8th Floor
One Winter Street
Boston, MA 02108

BWP AQ AP-STACK Instructions

PURPOSE

This form describes the physical characteristics of the facility's stacks: vertical release points for air emissions.

WHEN IS THIS FORM APPLICABLE?

REPORTING REQUIREMENT FOR STACKS

One AP-Stack form must be filed for each vertical air emission release point > 10 feet tall (i.e., height > 10 feet above the roof of the building).

NOTE: Downward facing vents, horizontal vents, goosenecks, and fugitive releases are not "stacks" and do not require a separate Stack form. Also, some units exhaust vertically, but have housings shorter than 10 ft above the roof of the building (e.g., ventilation exhausts that may be 3-5 ft tall). This type of release point does not require a Stack form – it is considered to be a Non-Stack release point. The forms do not (yet) have a specific code for this type of exhaust. You should select "fugitive" for such a vertical vent (< 10 feet tall). Then describe the release point briefly in the Notes field.

.

This form applies if your facility has a vertical stack, with or without a rain cap/sleeve.
Exclude the following types of release points:

- Fugitive
- Horizontal
- Downward facing vent
- Gooseneck air pollution control
- Emergency Engine Exhaust

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

How many versions of this form do electronic filers have to submit?

Submit one form for each vertical release point at your facility. You need to include forms for any stacks that were decommissioned since your last source registration as well as any stacks that were added in that time period.

CAUTION: FOR FILERS WITH NEW STACKS (VERTICAL RELEASE POINTS) SINCE THEIR LAST SOURCE REGISTRATION

You must create a new stack form for any new stack. If you have not already created the new stack, prior to submitting your complete source registration (when first opening your source registration package), you must:

- Under <Related Forms>, open the first form labeled <AQ Source Registration Package>;
- Under Section A, Q.1 – check the box that indicates new equipment has been added;
- Under <Related Forms>, select <New APForm Creator>;
- Choose the appropriate form and enter the number of new units;
- Validate the form;
- Follow subsequent instructions.

You must now revalidate any forms that you had already worked on; therefore, it is best to create the new stack when you first open the source registration package.

HOW DO I ENTER IN THE FORMS UNUSUAL EXHAUSTS, SUCH AS VERTICAL VENTS?

Some units exhaust vertically, but have housings shorter than 10 ft above the roof of the building (e.g., ventilation exhausts that may be 3-5 ft tall. This type of release point does not require a Stack form – it is considered to be a Non-Stack release point. The forms do not (yet) have a specific code for this type of exhaust. You should select "fugitive" for such a vertical vent (< 10 feet tall). Describe the release point briefly in the Notes field.

A.. STACK DESCRIPTION

Note: In general the information requested below will be pre-populated from MassDEP's database. However, certain data submitted to MassDEP on paper AP forms was not historically stored in SSEIS. That data will not appear on the electronic forms until it has been submitted electronically.

With certain exceptions, which will be noted, the preparer can edit any information listed below.

.TIP: If you obtained a plan approval for the stack you are reporting you will have received two documents from MassDEP: a plan approval letter and a copy of the permit application that you submitted to MassDEP. It will be easier to fill out the Source Registration forms if you refer to those two documents.

1. Facility Identifiers

The name and identifying numbers of the facility or plant that is reporting.

a. Facility Name

b. DEP Account number

c. Facility AQ Identifier - SSEIS ID

This will be pre-populated from the information on your BWP AQ SP-SR Form.

NOTE: You cannot change the facility name on this form. To change the facility's name you must contact your MassDEP Regional Office FMF Data Manager.

How the new system relates to the old SSEIS stack-point-segment numbering?

In SSEIS, ALL release points including downward facing and horizontal vents, goosenecks, and fugitive releases were considered "stacks". In the new database, only vertical release points are considered "stacks" with assigned DEP and Facility stack numbers and an AP-STACK form.

eDEP allows you to change the name (A.2.a) and give your own number (A.2.b) to each stack. MassDEP keeps track of the stacks by the DEP number (A.2.c) and therefore you cannot change it. The DEP number is the old SSEIS stack number.

2. Stack Identifiers:	If this is a new stack: Assign the stack a name/number in order to uniquely identify it. If this is an existing stack: Assign or change the stack name/number in order to uniquely identify it.
	A unique name of your choice that will allow you to recognize this stack on future reports.
a. Facility's choice of stack name	A unique number or code of your choice that will allow you to recognize this unit on future reports. *Example: Boiler #1, Emergency Generator #2, Fire Pump #3 etc.*
b. Facility's stack number	For existing stacks: If this is an existing stack, the information will be pre-populated but you may change it to better identify it for your records.
c. DEP stack # - old SSEIS stack #	If this is a new stack the field is locked – MassDEP will assign this number. If this is an existing stack, the information will be pre-filled for existing stacks. .
	A unique number assigned by MassDEP that allows MassDEP to recognize the stack on future reports.
3. Stack type: Check the box	Vertical Vertical with rain cap/sleeve
3.b Combined stacks	Enter the number of stacks being combined on this form.
	WHEN CAN STACKS BE COMBINED ON ONE FORM AND HOW SHOULD THE DATA BE REPORTED? You may report multiple stacks on one stack form in the following situations: (1) When the units that emit through these stacks are combined -- for example, where several small boilers are combined and they each have their own stacks, then report all of those stacks on one Stack form and enter the number of stacks in the Combined Stacks field. Describe the particular situation in the Notes field of the Stack form. (2) When one unit has multiple stacks -- again, describe the configuration in the Stack form Notes field. (3) When there are several identical stacks at the facility. If the stacks are exactly identical, then they may be reported on one Stack form. In (1) and (2) above, the data for the stacks may not be identical: In the name, indicate that the stacks are combined by using the word "combined". For dimensions, give the largest. For exit velocity and temperature, give the highest/lowest. If materials are not the same, describe in "other".
4. Dimensions:	
• Height in feet • Diameter in feet	Enter the stack dimensions. Height is above ground. Diameter is internal.
5. Gas exit velocity:	This is the range of speeds in feet per second with which the gas exits the stack.
• Low end – feet per second	Valid range 0.1 through 500
• High end – feet per second	Valid range 0.1 through 500
6. Exit temperature	This is the range of temperature in degrees Fahrenheit at which the gas exits the stack.
• Low end – ° Fahrenheit	Valid range 50 through 1800
• High end – ° Fahrenheit	Valid range 50 through 1800
7. Stack liner material:	Check the appropriate box, if other describe Metal Brick Refractory Other: Describe "other"

8. Decommission date –if applicable (mm/dd/yyyy)	Complete only if the stack was permanently removed. **NOTE:** Enter a Decommission Date ONLY when ALL of the stacks have been removed. If only a portion of the stacks have been removed, then just adjust the number in the Combined Stacks field to reflect the current number of stacks.
When / how to delete (decommission) a stack?	Delete a stack when it is permanently taken out of service by entering a Decommission Date (A.8). You must complete the form for this Year of Record, but eDEP will know to remove it from your next Source Registration package. Stacks decommissioned in this report will not appear on the NEXT source registration overview page of the SR package.

B. EMISSION UNITS ASSOCIATED WITH STACK

These fields are provided for information only. You cannot change them on this form.

They show which emissions units are associated with this stack.

If you want to change these associations, you must do so on the appropriate emissions unit form:

- AP-1 for Fuel Utilization Equipment
- AP-2 for Process Emissions
- AP-3 for Incinerators

NOTE: Any changes you make to these associations will not show up on this form until you have submitted your entire source registration package to MassDEP.

C. NOTES AND ATTACHMENTS

This section is to identify any explanatory material the facility is choosing to submit along with this form.

If the material can be sent electronically, check the box for the appropriate form.

If paper information must be submitted, list the titles of the documents being submitted on the lines provided and mail to:

Mr. Robert Boisselle
Department of Environmental Protection, 8th Floor
One Winter Street
Boston, MA 02108

BWP AQ AP-TES Total Emissions Statement & Hazardous Air Pollutant List Instructions

PURPOSE

This summarizes the annual air pollution emissions for the facility.

WHO MUST FILE THIS FORM?

This form must be completed for each facility's Source Registration package.

HOW MANY VERSIONS OF THIS FORM ARE REQUIRED?

One form is necessary when the submittal contains an AP-form for an emission unit. If the submittal is correcting information on the AP-SR or AP-Stack forms, the AP-TES is not necessary.

WHEN IS THIS FORM APPLICABLE?

Applicability for filers

This form applies to all filers except if the submittal is amending/correcting information on the AP-SR or AP-Stack forms, the AP-TES is not necessary.

A. ANNUAL TOTAL EMISSIONS STATEMENT

Most of the information on the form below will have been calculated automatically on the basis of the information you provided on the AP-1, AP-2, AP-3 and AP-4 forms.

1. Facility Identifiers

The name and identifying numbers of the facility or plant that is reporting.

a. Facility Name

This will be pre-populated from the information on your BWP AQ SR Form.

b. DEP Account number

c. Facility AQ Identifier –SSEIS ID

NOTE: You cannot change the facility name on this form. To change your facility's name, you must contact your MassDEP Regional Office FMF Data Manager.

2. Total Emissions

This form calculates the facility's actual and potential emissions by adding the emissions data entered in the form for each emission unit. The results are displayed in the table below. You must validate the forms for each emission unit before the results displayed below can be calculated. To enter Hazardous Air Pollutant (HAP) emissions, see Section D.

How are total emissions calculated?

When you open this form, eDEP sums the emission data from all of the emission units at this facility for which you have submitted data for the current Year of Record.

These fields are locked; you cannot edit these values.

The values displayed in the table will not **reflect total facility emissions until all emission units at your facility are updated for the current year of record**.

3. Facility-wide Emission Limits

Please enter facility-wide annual or short-term emission limits below, if any. To enter HAP restrictions, see Section D.

Total Emissions -

This form reports the total actual and potential facility-wide emissions for each contaminant (excluding 'other') you reported on the AP- forms that you have filled out and validated for this year. (If you have not filled out and validated all of the required emissions unit forms, the data on this form will understate your facility-wide emissions.)

Contaminants include:

PM10 PM2.5	SO2 NO2	CO VOC	HOC Reserved	NH3 CO2

CO2	Check the box if you want to enter the CO2 emissions for this FACILITY as a whole – Submitting CO2 emissions is OPTIONAL. Potential CO2 emissions are optional - enter "0" if you do not wish to enter a potential CO2 emission. For instructions on calculating CO2 emissions, please see Appendix C. **NOTE:** When reporting your facility CO2 emissions, you must report the same value here as you reported for your emission units subject to annual 40 CFR Part 75 reporting for CO2 to EPA through the Clean Air Markets Division. Potential CO2 emissions are optional -- enter "0" if you do not wish to enter a potential CO2 emission..
Actual for previous year	For repeat filers: This information will be provided by the system. For new emission units: This information is not applicable.
Actual for year of record Potential emissions at maximum capacity:	The information will have been calculated automatically on the basis of the information you provided on the AP-1, AP-2, AP-3 and AP-4 forms
Facility-wide max allowed (permitted) emissions-annual: Facility-wide max allowed (permitted) emissions- short term: Short term period: Basis: DEP approval number or regulation:	Enter the requested information. **NOTE:** This applies to restrictions on emissions ONLY. Restrictions on fuel use, raw material use or products are reported in Question 4. **NOTE:** Only enter restrictions that apply to the entire facility. Many restrictions apply only to a particular emission unit. Those have already been reported on the emission unit's form.
When do I complete the "max-allowed" (permitted) emission fields?	Complete the "max-allowed" fields if there is an annual or a short-term emission limitation applicable to the facility as a whole expressed in either a DEP approval or a regulation. Be sure to enter the approval number or regulation under "Basis" below. For example, a facility-wide emission limit from a plan approval such as 45 TPY of oxides of nitrogen, or 99 tons per year of particulate matter.
If the restriction is mentioned in multiple approvals:	Enter the most recent approval number for the restriction .
4. If you have facility-wide fuel, raw material, or product restrictions, complete the following:	Provide the requested information for each facility-wide restriction, otherwise leave blank DEP approval number (most recent) Amount of restriction Restriction units (e.g., gallons, tons) Per unit time (e.g. yr, mo, wk, day, hr) Description of fuel, raw material or product restricted. **NOTE:** Only enter restrictions that apply to the entire facility. Many restrictions apply only to particular emissions units. Those have already been reported on the emission unit's forms.

When do I complete the facility-wide restriction fields?	Complete Question 4 fields, if there is an annual or a short-term restriction (other than emissions), which applies to the whole facility. For example, a facility-wide limit from a plan approval for xxx gallons of fuel per month and xxxx gallons per year OR a limit on the hours of operation or a production limit.
	Enter the approval number for the approval.
If the restriction is mentioned in multiple approvals:	Enter the most recent approval or regulation.

B. GREENHOUSE GAS (GHG) LIST

WHAT ARE THE THRESHOLDS FOR REPORTING GREENHOUSE GASES?	There are no thresholds – if your facility, to the best of your knowledge, uses or emits any amount of these substances, check the appropriate box/es. NOTE: This does NOT include refridgeration equipment and other similar sealed systems (unless the facility services or manufactures such systems). This also does NOT include products of combustion.

	Use	Emitted
Please indicate which – if any - of the following greenhouse gas chemicals are used and/or emitted by checking the appropriate box:	**Check the appropriate box(es) for each chemical.**	
	Nitrous oxide N2O	
	Hydrofluorocarbons (HFC's)	
	Sulfur Hexafluoride (SF6)	
	Perfluorocarbons (PFCs)	

C. HAZARDOUS AIR POLLUTANT (HAP) LIST

What is a HAP?	Hazardous Air Pollutants (HAPs) are those labeled as such by the US EPA under Section 112 of the Clean Air Act as listed in Section C of the TES form. For the purposes of Source Registration, HAPs do not include products of combustion, components of a fuel, or materials used in a sealed system such as a condenser.
What are the thresholds for reporting HAPs?	If you use 500 GALLONS or more OR use 1 TON or more or emit more than 1 TON of any individual Hazardous Air Pollutant (HAP) listed per year, check the appropriate boxes. Do not include products of combustion, components of a fuel, or materials used in a sealed system such as a condenser when estimating your emissions of an individual HAP.
1. Does your facility use any of the Hazardous Air Pollutant chemicals regulated under Section 112 of the Clean Air Act listed below and on the following pages:	Check the appropriate yes or no box If no, skip to section D If yes, place a check in the use box for all chemicals that you use and in the emit box for all chemicals that you emit. **Note:** In general you emit all chemicals that you use. If you emit a chemical you must, by definition also "use" it.

D. HAZARDOUS AIR POLLUTANT EMISSIONS

1. Does the facility have the potential to emit (PTE) 10 tons of any single listed Hazardous Air Pollutant (HAP)

Answer Yes or No as appropriate.

Potential emissions ⓘ are the maximum allowable emissions under the terms of the applicable plan approval, or, if no plan approval is required, under the applicable regulations.

See the Appendix C: Example Calculations.

CAUTION: Pay CLOSE attention to the "potential emissions" calculations, because potential emissions help to define the regulatory requirements to which your facility is subject.

For example,

- ✓ *If your facility-wide potential emissions exceed the major source thresholds ⓘ for any air contaminant including HAPs ⓘ, you are required to obtain an air operating permit pursuant to 310 CMR 7.00: Appendix C, or to restrict your emissions through a federally enforceable permit (RES) pursuant to (310 CMR 7.02(9)). Contact your MassDEP regional office if you exceed a major source threshold and you have not filed an application for an air operating permit or a RES. The names and addresses of the Regional Offices are listed in Appendix F.*
- ✓ *Similarly, if your potential emissions of Hazardous Air Pollutants ⓘ (HAPS) exceed the applicable Maximum Achievable Control Technology (MACT) standard threshold (for most standards, this is a major source threshold) in 40 CFR Part 63 as of the substantive compliance date ⓘ for that standard, EPA policy states that your facility would NOT be allowed to restrict your potential emissions below the applicable MACT threshold. Thus, according to EPA policy, unless you restrict your facility's potential emissions to under the threshold BEFORE the substantive compliance date, your facility would be required to comply with the MACT standard. Furthermore, as a consequence of being subject to a MACT standard, you would be required to obtain an operating permit for your facility, pursuant to 310 CMR 7 Appendix C. The list of MACT standards and their substantive compliance dates can be found in Appendix E.*

DO YOU NEED AN AIR OPERATING PERMIT?

If you answer yes to Questions 1 or 2, the facility exceeds the applicability thresholds for the federally mandated operating permit program. Contact your Regional MassDEP Permit section for information. The Source Registration website lists the necessary phone numbers: http://mass.gov/dep/service/compliance/sr.htm.

You must open another browser window to access this URL.

2. Does the facility have the potential to emit (PTE) a total of 25 tons of any combination of listed Hazardous Air Pollutants (HAPs)?

Answer Yes or No, as appropriate.

Please refer to the cautions about potential emissions in the question above.

Are you subject to TURA?

If you manufacture, process, or otherwise use more than 10,000 lbs of any one Toxics Use Reduction (TURA) chemical during the calendar year you may be subject to TURA reporting. Certain PBT chemicals have lower reporting thresholds. Visit the MassDEP TURA website at http://www.mass.gov/dep/toxics/approvals/turforms.htm for more information.

You must open another browser window to access this URL.

3. Does the facility have a restriction on total HAPS?	Answer Yes or No, as appropriate. You must answer Yes, if you have any restriction on any facility-wide or emission unit restriction on any HAP. **Note** for Municipal Waste Combustors: Your facility has restrictions on certain HAPS. You must answer yes.
4. Are you required to report HAP emissions for any other reason? (e.g. a permit condition)	Answer Yes or No, as appropriate, if you must report on HAPS for any reason.
5. If you answered "yes" to any of the Questions 1 – 4 above, eDEP will generate additional pages in which you may enter those emissions.	If you answered no, proceed to E. Notes and Attachments. If you answered yes, you must click <Validate> now to access the additional pages for entering HAP emissions. The system will force you to make any necessary corrections. Once you have made all of the required corrections you will be returned to the <Related Forms Transaction ID #> page. To continue your work on this form, click on the <TES HAP > form, you see listed under the form you just completed. Once you have completed the additional HAP form, you will have to come back into this form to finish the notes and attachments (if you have any).

E. NOTES AND ATTACHMENTS

This section is to identify any explanatory material the facility is choosing to submit along with this form.

If the material can be sent electronically, check the box for the appropriate form.

If paper information must be submitted, list the titles of the documents being submitted on the lines provided and mail copies to:

Mr. Robert Boisselle
Department of Environmental Protection, 8th Floor
One Winter Street
Boston, MA 02108

F. HAZARDOUS AIR POLLUTANT EMISSIONS

(FIND THIS SECTION IN A SEPARATE FORM UNDER THE TES FORM IF YOU NEED TO REPORT HAPS).

Emissions (in tons/year): Enter the actual and unrestricted potential emissions for your largest single HAP your facility emitted the most of for this year of record. Enter emissions for any additional HAPs, and then validate the form. Do not enter Total HAP emissions here- eDEP will present another form for Total HAPs after you validate this form.

Max Allowable Emissions (in tons per year): Enter only restrictions (limits) that apply to the entire facility. If there are no such restrictions, leave blank.

WHERE DO YOU ENTER TOTAL HAP EMISSIONS?	On the NEXT form, Section G. After you validate this form, eDEP will generate the HAP Total form, where you enter your facility-wide total HAP emissions and any FACILITY-WIDE restrictions.
WHICH HAPS MUST BE REPORTED?	If you answered YES to any of the Questions D1-D4, you need to report your single largest HAP emission and your total HAP emissions for the year. You also need to report emission for any HAP for which you have an emissions restriction. eDEP will generate the forms needed to enter the data. This form reports your total actual and potential facility-wide emissions for HAPS for this year and that you reported on your previous source registration. There is a set of lines for 6 HAPS. If you have more HAPS then you must: 1. Fill in the information for the first six. 2. Click YES, in response to the question at the bottom of the form: "Do you have emissions to report for individual HAPs in addition to those above?" 3. Validate the form and correct any errors. 4. The system will generate an additional HAP emissions forms (you will be returned to the <Related Forms – Transaction ID> page). 5. Complete and validate that form and return to this one.
Identify HAPS - CAS #for individual HAPS:	If the HAP is an individual chemical, write the CAS number. If the HAP is a formulation or mixture, write its name.
Chemical name:	If the HAP is an individual chemical, write its name.
Actual for previous year	For electronic repeat filers: This information will be provided by the system.
Actual for year of record Potential emissions at maximum capacity:	Calculate and enter this information.
Facility-wide permitted--annual: Facility-wide permitted---– short term: Short term period: Basis: DEP approval number or regulation:	Enter the requested information. **Note:** This applies to facility-wide HAP restrictions ONLY. **NOTE:** Only enter restrictions that apply to the entire facility. Many restrictions apply only to particular emissions units. Those should have already been reported on the emissions unit form.

G. HAZARDOUS AIR POLLUTANT (HAP) EMISSIONS TOTAL

This form reports the total facility-wide actual, unrestricted potential, and permitted emissions of all HAPS combined.

It also reports prior year total facility-wide HAP emissions for electronic filers.

1. Total HAP Emissions	Enter your Total HAP emissions for the facility below. Please enter any facility-wide restrictions on Total HAPs below as well.

a. Actual for previous year eDEP only	For repeat filers: This information will be provided by the system. For new facilities: This information is not applicable.
b. Actual for year of record c. Potential at max capacity uncontrolled:	Calculate and enter this information. The potential emissions are the unrestricted uncontrolled emissions assuming you operate 24 hours per day 7 days a week at maximum capacity. The definition of Potential Emissions in 310 CMR 7.00 takes into account the restrictions of a plan source's plan approval(s), approved emission control plan(s), operating permit, certification(s), restricted emission status, notification(s) and applicable regulations. However, the number entered here should not consider restrictions. The restrictions are to be entered on the forms in the next section. CAUTION: Pay close attention to the "potential emissions" calculations, because potential emissions help to define the regulatory requirements to which your facility is subject.
d. Max allowed emissions (permitted) - annual: e. Max allowed emissions (permitted) – short term: f. Short term period:	Enter the requested information. **Note:** Only enter restrictions that apply to the entire facility. Many restrictions apply only to particular emissions units. Those have already been reported on the emission unit forms **Note:** This applies to facility-wide HAP restrictions ONLY. Restrictions on fuel use, raw material use or products are reported in Question 4.
g. Basis for max allowed emissions:	DEP approval number or regulation.

COMPLETION OF SOURCE REGISTRATION SUBMITTAL

RESPONSIBLE OFFICIALS SIGNATURE

Once the AP-TES Form has been validated, it will be necessary for the Responsible Official (RO) to electronically sign the document. In most cases, this will require the preparer to share the document with the RO.

Electronically Signing the Source Registration Package

To electronically sign the Source Registration Package, the RO will need to sign in using his own username and password. Once signed in, he can access source registration package from his home page. It should be a package with the status "Work in Progress". Once he has opened the "Active" package, the RO will need to "click" on "Step 2 Acceptance (Signature)".

Once inside the Step 2 process, the RO needs to click on the checkbox "CERTIFICATION FOR ALL FORMS IN THIS SOURCE REGISTRATION PACKAGE." By checking this box, you are certifying that the information contained within the submittal is complete and correct to the best of your knowledge. The RO will then need to type his name in the appropriate area. The date should be filled in with the correct date; however, if not type in the correct date. The RO will then need "Accept" the submittal.

Submitting the Source Registration Package.

After accepting the submittal, the RO can proceed to Step 3 and Submit the source registration package by "clicking" on "Step 3 Submit".

This completes the Source Registration process.

Printing a copy/Saving an electronic copy

There is only one job left to complete. A print out or electronic copy of the Source Registration package to be saved so that it is readily accessible if it is ever necessary to reference the document. This can be done by "clicking" on the "Get Copy to Save/Print" button and following the instructions listed within that webpage. Because the documents are "processed to be printed" in the order the requests are received, it may take awhile to complete this task. You can log out and sign back in at a later date to finish printing a copy, saving an electronic copy, or both.

You may be requested to present your Source Registration during an inspection of your facility or at any other time upon request by the MassDEP.

APPENDICES

SOURCE REGISTRATION PACKAGE

APPENDIX A: DEFINITIONS

ACTUAL EMISSIONS Emissions emitted from the facility or emission unit for the specified time period.

AIR CONTAMINANT An air pollutant regulated by MassDEP.

CHEMICAL ABSTRACT SERVICE (CAS) NUMBER The number assigned by the Chemical Abstract Service to each individual chemical compound.

Note: HOCs, HYCs, VOCs all are individual chemical compounds and have a CAS number. Formulations and fuels are mixtures of chemicals and do NOT have CAS numbers. The individual components of the formulation have CAS numbers however, and these numbers are listed on the MSDS for the formulation.

CLEAN AIR ACT CHEMICAL (CAA CHEMICAL) An air contaminant regulated by the Federal Clean Air Act. This includes criteria air pollutants, Hazardous Air Pollutants (HAP) pursuant to 42 U.S.C. 7401, Section 112 or any other substance regulated as a criteria pollutant, or any substance regulated pursuant to a New Source performance Standard (NSPS) under 40 CFR 60, or pursuant to a National Emission Standard for Hazardous Air Pollutants (NESHAPs) under 40 CFR 61 and 63.

COMBUSTION DEVICE A combustion device means all equipment similar to process heaters used for combustion of organic vapors, including but not limited to, thermal incinerators, flares, and boilers.

CRITERIA AIR POLLUTANT One of the following compounds regulated by the Federal Clean Air Act and 310 CMR 7.0: PM10, PM2.5, NH3, VOC, CO, NO_X, SO_2, and Pb.

CRITICAL AREA OF CONCERN Towns for which there are more stringent emission fuel standards:

Adams
Amherst
Arlington
Athol
Attleboro
Auburn
Belmont
Boston
Boylston
Braintree
Brookline
Cambridge
Canton
Chelsea
Chicopee
Dalton
Dedham
East Longmeadow
Easthampton
Everett
Fall River
Fitchburg
Gardner
Grafton
Greenfield
Hadley
Haverhill
Holden
Holyoke
Lawrence
Lee
Leicester
Leominster
Longmeadow
Lowell
Ludlow
Lynn
Malden
Medford
Melrose
Millbury
Milton
Needham
New Bedford
Newburyport
Newton
North Adams
Northampton
Orange
Palmer
Peabody
Pittsfield
Quincy
Revere
Salem
Sandwich
Saugus
Shrewsbury
Somerset
Somerville
Southbridge
Springfield
Stoneham
Taunton
Wakefield
Waltham
Ware
Watertown
Webster
West Boylston
West Springfield
Westfield
Weymouth
Winchester
Winthrop
Woburn
Worcester

EMISSION METHOD (EM)

The method used to determine the emissions. The methods are assigned the following codes:

a. Based on AP-42/FIRE emission factors
b. Source Testing or emission measurement
c. User supplied emission factors

EMISSION UNIT (EU)

Any individual piece of equipment from which any air contaminant is emitted to the ambient air space, *for example, an individual boiler, a single degreaser, etc.*

ENFORCEABLE LIMIT

An operating restriction in a federally enforceable permit, plan approval, or certification, or a state or federal air pollution control regulation.

FACILITY-WIDE POTENTIAL EMISSIONS:

Facility-wide potential emissions are the maximum emissions that a *facility* is legally allowed to release. Normally facility-wide potential emissions equal the sum of the potential emissions for each emission unit. However some facilities have enforceable limits that imposed facility-wide restrictions on their operating rates or emissions. In this case facility-wide potential emissions equal the facility- wide restrictions. *Examples include facilities with 25% or 50% Certifications pursuant to 310 CMR 7.02 (11). Facility-wide potential emissions of a contaminant for such facilities equal 25% of the major source threshold for that air contaminant or 50% of the major source threshold for that contaminant, respectively. See Major Source Thresholds ⓘ for the thresholds for each air contaminant.*

FEDERAL REGISTER (FR)

The Federal publication that lists notices of proposed and promulgated federal regulations.

FORMULATION

Any mixture containing an organic compound. A formulation is an organic material.

Note: A formulation will not have a CAS number, because it is a mixture. However, the CAS number and chemical characteristics of each organic compound chemical included in the mixture will be found on the MSDS ⓘ for the formulation provided by the supplier.

HALOGENATED ORGANIC COMPOUND (HOC)

The following specific chemicals are reported as HOCs:

HALOGENATED ORGANIC COMPOUNDS (HOCs)

CAS #	Chemical Name
127184	Perchloroethylene (tetrachloroethylene)
75092	Methylene chloride (chloromethane)
75694	CFC-11 (trichlorofluoromethane)
75718	CFC-12 (dichlorodifluoromethane)
75456	CFC-22 (chlorodifluoromethane)
75467	CFC-23 (trifluromethane)
76142	CFC-114 (dichlorotetrafluoroethane)
76153	CFC-115 (chloropentafluoroethane)

HAZARDOUS AIR POLLUTANT (HAP)

An air contaminant listed by EPA as a HAP, pursuant to 42 U.S.C. 7401, Section 112. HAPs are listed on the BWP AQ CAA –Hazardous Air Pollutants Form.

HYDROCARBONS (HYC)

The following specific chemicals are reported as HYCs:

HYDROCARBONS (HYCs)

CAS #	Chemical Name
67641	Acetone
74840	Ethane
74828	Methane
79209	Methyl acetate
71556	Methyl chloroform (1,1,1-trichloroethane)
76131	CFC-113 (trichlorotrifluoroethane)
593704	HCFC-31 (chlorofluromethane)
306832	HCFC-123 (2,2-dichloro-1,1,1,-trifluoroethane)
354234	HCFC-123a (1,2-dichloro-1,1,2-trifluroethane)
2837890	HFCF-124 (2-chloro-1,1,1,2-tetrafluoroethane)
1717006	HCFC-141b (1,1-dichloro-1-fluoroethane)
75683	HCFC-142b (1-chloro-1,1-difluoroethane)
1615754	HCFC-151a (1-chloro-1-fluoroethane)
422560	HCFC-225ca (3,3-dichloro-1,1,1,2,2-pentafluropropane)
507551	HCFC-225cb (1,3-dichloro-1,1,2,2,3-pentafluoropropane)
75105	HFC-32 (difluoromethane
354336	HFC-125 (pentafluoroethane)
359353	HFC-134 (1,1,2,2-tetrafluoroethane)
811972	HFC-134a (1,1,1,2-tetrafluoroethane)
27987060	HFC-143a (1,1,1-trifluoroethane)
75376	HFC-152a (1,1-difluoroethane)
353366	HFC-161 (ethylfluoride)
690391	HFC-236fa (1,1,1,3,3,3-hexafluropropane)
679867	HFC-245ca (1,1,2,2,3-pentafluropropane)
24270664	HFC-245ea (1,1,2,3,3-pentafluropropane)
431312	HFC-245eb (1,1,1,2,3-pentafluropropane)
460731	HFC-245fa (1,1,1,3,3-pentafluropropane)
431630	HFC-236ea (1,1,1,2,3,3-hexafluropropane)
406586	HFC-365mfc (1,1,1,3,3-pentaflurobutane)
138495428	HFC43-10mee (1,1,1,2,3,4,4,5,5,5-decafluropentane)
163702076	C4F9OCH3 (1,1,1,2,2,3,3,4,4-nonafluro-4-methoxy-butane)
163702087	(CF3)2CFCF2OCH3 (2-(difluromethoxymethyl)-1,1,1,2,3,3,3-hepta fluropropane)
163702054	C4F9OC2H5 (1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane)
163702065	(CF3)2CFCF2OC2H5 (2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3,-hepta fluoropropane)

Cyclic, branched, or linear, completely fluorinated alkanes,
Cyclic, branched, or linear, completely fluorinated ethers with no saturations,
Cyclic, branched, linear, or completely fluorinated tertiary amines with no unsaturations,
Cyclic, branched, or linear, completely methylated siloxanes,
Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbons and fluorine.

INSIGNIFICANT ACTIVITIES

Activities and their associated emissions that do not need to be reported in the source registration

- ✓ Open burning conducted in accordance with the requirements of 310 CMR 7.07(2), 7.07(3)(a) and 7.07(3)(e)
- ✓ Office activities and the equipment and implements used there in such as typewriters, printers and pens
- ✓ Interior maintenance activities and the equipment and implements used therein, such as cleaning products and air fresheners. This does not include any cleaning of production equipment or activities regulated by 310 CMR 7.18

- ✓ Bathroom and locker room ventilation and maintenance
- ✓ Copying and duplication activities for internal use and for support of office activities at the facility
- ✓ The activities not regulated by 310 CMR 7.18 in maintenance shops, such as welding, gluing, soldering
- ✓ First aid or emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation
- ✓ Laundry operations that service uniforms or other clothing used at the facility that are not regulated by 310 CMR 7.18
- ✓ Architectural maintenance activities conducted to take care of the buildings and structures at the facility, including repainting, re-roofing, and sandblasting
- ✓ Exterior maintenance activities conducted to take care of the grounds of the facility, including parking lots and lawn maintenance
- ✓ Food preparation to service facility cafeterias and dining rooms
- ✓ The use of portable space heaters which reasonably can be carried and relocated by an employee
- ✓ Liquid petroleum gas (LPG) or petroleum fuels used to power the facility's mobile equipment and not otherwise regulated by the Department
- ✓ Emergency vents not subject to the accidental release regulations
- ✓ Surface coating and painting processes which exclusively use non-refillable aerosol cans
- ✓ Vacuum cleaning systems used exclusively for commercial or residential housekeeping
- ✓ Ventilating systems used exclusively for heating and cooling buildings, for the comfort of people living or working within the building serviced by said system, which EPA has determined need not be contained in an operating permit
- ✓ Ventilating and exhaust systems for laboratory hoods used:
  - -By academic institutions for academic purposes
  - -By hospitals and medical care facilities used for medical care purposes and medical research only
  - -By laboratories, which perform laboratory, scale activities as defined by OSHA
  - -By facilities for quality assurance and quality control testing and sampling activities
- ✓ Surface coating and printing processes used exclusively for educational purposes in educational institutions
- ✓ Kilns or ventilating hoods for art or ceramics curricula at colleges, primary or secondary schools

MAJOR FACILITY THRESHOLD

The emission threshold for being classified as a major facility. An owner/operator of a facility with PTE equal to or greater than those listed below, is required to apply for an Air Operating permit pursuant to 310 CMR Appendix C, or obtain a restriction of their facility's potential to emit an air contaminant pursuant 310 CMR 7.02(9) or a 25%/50% Certification at the 50% level pursuant to 310 CMR 7.02(11).

Pollutant	Major Source Threshold in Tons per Year (TPY)
VOC	Potential to emit 50 TPY
NO_X	Potential to emit 50 TPY
SO_2	Potential to emit 100 TPY
TSP	Potential to emit 100 TPY
PM10	Potential to emit 100 TPY
CO	Potential to emit 100 TPY
HAPS	Potential to emit 10 TPY of any one HAP OR 25 TPY of all HAPs

MATERIAL SAFETY DATA SHEET (MSDS)

A fact sheet listing the chemical components and the chemical, physical, hazard, and toxic characteristics of any formulation or chemical compound. Chemical manufacturers are required to prepare MSDS sheets and ship them with each chemical product they sell.

NUMBERING STACKS, POINTS, AND SEGMENTS

SSEIS (Stationary Source Emissions Inventory System), MassDEP's computer system that stores source registration data, automatically assigns numbers to a facility's stacks, points (emission units) and segments (fuels, organic materials, and other raw materials used in the emission unit). Figure A-1 shows how facilities are configured and stacks, points, and segments are numbered in SSEIS.

The numbers SSEIS assigns are always sequential and are automatically updated if a point, stack or segment is added or eliminated at the facility. As a result, the number assigned to a particular point, stack or segment will change from year to year, if a facility alters its equipment or raw materials.

- ✓ If a facility adds a point (or a stack, or a segment) on one year's source registration, that new point (stack, or segment) will be assigned the next available sequential number on the subsequent year's Side-by-Side Computer Report.

  For example:

  In 1996, a facility had one stack and three emission units: a degreaser, a spray coater, and a roll coater. The facility installed an additional spray coater in 1997.

  The "Side-by-Side" report sent to the facility in 1998 (the 1998 Report) listed 3 emission units as follows:

  Point #1: "Degreaser"

  Point #2: "Spray Coater"

  Point #3: "Roll Coater"..

  When the facility submitted its1998 source registration it included a BWP AQ AP-2 Emission Unit: Process Emissions form for the new spray coater unit it had installed during 1997. The facility identified this new spray coater as "Spray Coater B".

  The Side-by-Side Computer Report sent to the company in 1999 (the 1999 Report) showed FOUR emission units, with the new spray coater added as "Point #4 as follows:

  Point #1: Degreaser

  Point #2: Spray Coater

  Point #3: Roll Coater

  Point #4: Spray Coater B

- ✓ If a point (or stack or segment) is eliminated, the number assigned to all of the points (or stacks or segments) with a higher number than the one that was eliminated will drop by one.

  For example:

  The same facility eliminated its first spray coater during 1998. So it crossed off Point #2 on the 1999 Report when it submitted it to MassDEP. On the "Side-by-Side" report the facility receives in 2000 (the 2000 Report), the points would be renumbered as follows:

  Point #1: Degreaser

  Point #2: Roll Coater

  Point #3: Spray Coater B

  NOTE: *The "Roll Coater" has become Point #2, and "Spray Coater B" has become Point #3. There is no Point #4, and Point #1 "Degreaser" is unchanged.*

Stacks and segments are renumbered in the same way if a stack or segment is added or eliminated. New stacks or segments are assigned the next sequential number. If a stack or segment is eliminated, the number assigned to those stacks or segments with a higher number than the stack or segment that was eliminated drops by one.

However segment numbering is a little different than point and stack numbering. Points and stacks are assigned a unique number: there is only one stack assigned the number "1", only one stack assigned the

number "2" etc. Similarly, regardless of what stack the point is assigned to, there is only one point assigned the number "1", only one point assigned the number "2", etc. However, segment numbering happens WITHIN a point, so a given segment number can be repeated.

For example:

The facility above uses one degreasing chemical: "Clene-Sol"; three different paints in the "Roll Coater": "red paint", "green paint" and "blue paint"; and two paints in "Spray Coater B" "yellow paint" and the same "red paint" that is used in the "Roll Coater".

Point #1 "Degreaser" would have one segment, numbered in the following way:

Segment #1: "Clene-Sol"

Point #2 "Roll Coater" would have three segments, numbered in the following way

Segment #1: "red paint"

Segment #2: "green paint"

Segment #3: "blue paint"

Point #3 "Spray Coater B" would have two segments, numbered as follows:

Segment #1: "yellow paint"

Segment #2:"red paint"

Note: The example illustrates three important points.

1. Note that three different segments were assigned the number "1", and two different segments were assigned the number "2".
2. Note that even though the "red paint" is the exact same formulation, it still shows up as two different segments because it is used in two different emission units.
3. Note that even though the "red paint" is the exact same formulation, it can be assigned two different segment numbers. (It could just as easily have been assigned # 1 in both Point #2 and Point #3, however, because "red paint" was entered first when the data for Point #2 was entered into SSEIS, and was entered second when the data for Point #3 was entered into SSEIS, "red paint" became Segment #1 in Point #2, and Segment #2 in Point #3.

TIP: Because the number that SSEIS assigns to the emissions unit (or stack or segment) can change, it is important that the facility assign its own identification name/number to the unit. Because this name/number will NOT change (unless the facility changes it) it can be used to keep track of stacks, points, and segments on the Side-by-Side Report after a facility changes its operations.

ORGANIZATION OF FACILITY DATA ON THE COMPUTER PRINTOUT

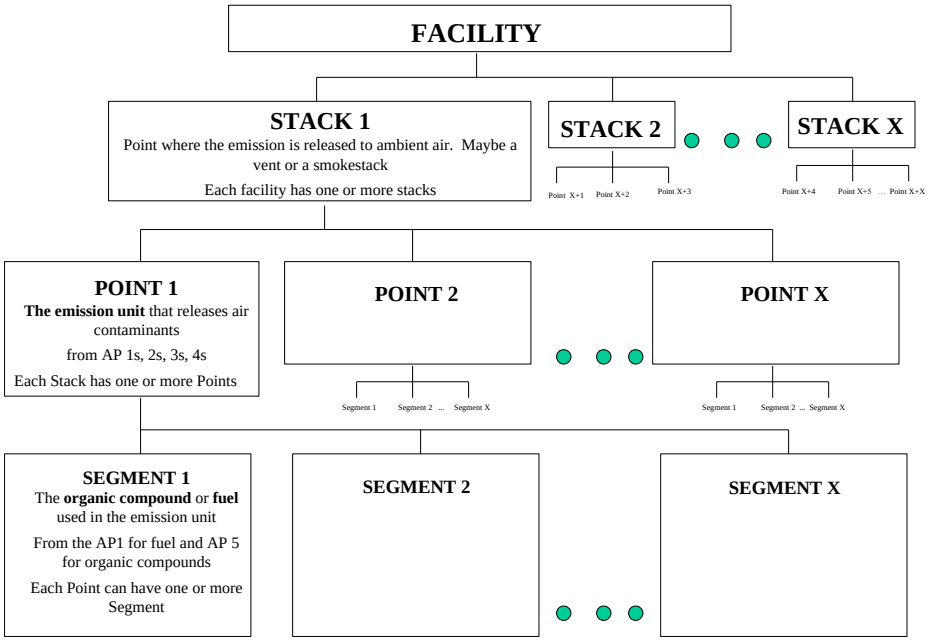

Figure A-1: Organization of Facility Data on the Computer Printout

ORGANIC COMPOUND Any chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbonates, metallic carbides, and ammonium carbonates.

Note: VOCs, HOCs, and HYCs are all Organic materials.

ORGANIC MATERIAL Any organic chemical compound ⓘ or mixture that contains an organic chemical compound. A formulation is an organic material.

Note: All VOCs, HOCs, and HYCs and mixtures containing VOCs, HOCs, or HYCs are organic materials.

OZONE SEASON The 153 days from May 1 to September 30 (approx 22 weeks).

PERMITTED EMISSIONS The maximum emissions allowed under the terms of the applicable permit or plan approval.

POINT

An emission unit. The "Side-by-Side" Computer Printout points are the emission units on which a facility is required to report.

POTENTIAL EMISSIONS

Potential emissions are the estimated emissions at a site. Potential emissions determine your facility's regulatory status. Potential emissions also make it possible to estimate the worst-case ambient air quality in order to make a conservative estimate of the facility's impact on ambient air quality.

The Source Registration program utilizes two types of potential emissions: unrestricted potential emission and maximum allowable, or restricted, potential emissions.

UNRESTRICTED POTENTIAL EMISSIONS

The uncontrolled emissions estimated at a facility assuming the facility operates continuously at maximum capacity. The potential emissions equal the emissions that would result if the facility:

- ✓ Emitted air contaminants at the MAXIMUM EMISSIONS RATE per unit of product produced or unit of raw material used,
- ✓ While operating at the maximum capacity,
- ✓ For the maximum number of hours per year possible (8760 hours per year).

MAXIMUM ALLOWABLE OR RESTRICTED POTENTIAL EMISSIONS

The maximum allowable emissions under the terms of a federally enforceable plan approval or permit, or, if no plan approval or permit is required, under the applicable regulations. The potential emissions equal the emissions that would result if the facility:

- ✓ Emitted air contaminants at the MAXIMUM ALLOWABLE EMISSIONS RATE per unit of product produced or unit of raw material used,
- ✓ While operating at the maximum allowable capacity,
- ✓ For the maximum allowable number of hours per year possible.

GROUND RULES:

A) When determining the MAXIMUM ALLOWABLE EMISSIONS RATE of each air contaminant:

1. The maximum emissions or emission rate may be restricted under a federally enforceable limit contained in a plan approval (BWPAQ-01, 02 or 03), Restricted Emission Status (BWPAQ-09), other permit *(e.g., Prevention of Significant Deterioration (PSD)),* regulation *(e.g., restriction on the sulfur content of fuel in 310 CMR 7.05),* or in a state or federal air pollution control regulation. If your plan approval or the applicable regulation specifies a maximum emission rate, use that rate to calculate your potential emissions.
2. Assume that the facility ONLY uses the fuel, the coating, or other raw material that generates the most pollution per amount used.

   For example,

   - ✓ *If you are permitted to use natural gas and oil, assume you use nothing but natural gas when you calculate your potential NO_X emissions, and assume you use only oil when calculating your potential SO_2 emissions.*
   - ✓ *If you are permitted to use three different coatings, and one has a VOC of 5 pounds per gallon, another has a VOC content of 4 pounds per gallon and the third has a VOC content of 3 pounds per gallon, assume you only use the 5 pound per gallon formulation when calculating your potential VOC emissions.*
3. Assume the facility operates any pollution control equipment required by a plan approval or a regulation in accordance with the terms of the plan approval or regulation.

   For example,

- ✓ *The facility plan approval specifies that the facility will operate a bag house that removes TSP at 95% efficiency, and the facility generates 100 pounds of pollution per 1000 pound of product produced before it is controlled. The maximum emission rate used to calculate potential emissions would equal 5.0% of 100 or 5 pounds per 1000 pounds of product produced.*

CAUTION: If the owner/operator of a facility has installed air pollution control equipment voluntarily, (that is, there is no regulatory or plan approval requirement to install and operate the equipment) then the pollution control equipment may NOT be considered when determining the facility's potential emissions. The pollution control equipment does not reduce a facility's potential emissions because the facility is legally allowed to operate without the control equipment.

B) When determining the MAXIMUM OPERATING RATE and MAXIMUM ALLOWABLE HOURS OF OPERATION:

The maximum operating rate may be restricted under an enforceable limit contained in a plan approval (BWPAQ-01, 02 or 03), Restricted Emission Status (BWP AQ-09), other permit *(e.g., Prevention of Significant Deterioration (PSD))*, regulation *(e.g., restriction on the hours of operation of an emergency generator in 310 CMR 7.02)* or in a state or federal air pollution control regulation. These restrictions may be expressed as:

- ✓ Allowable capacity of the equipment
- ✓ Limits on the hours of operation
- ✓ Limits on the pounds or gallons of materials used

If such a restriction exists, use that restriction when calculating the maximum allowable or restricted potential emissions.

If the facility is NOT restricted by permit or regulation:

- ✓ The maximum operating rate is the maximum rate at which the equipment can be operated *(e.g., the maximum firing rate of a boiler)*
- ✓ The maximum hours of operation are 8760 *(i.e., [24 hours per day] x [365 days per year])*.

C) When a PERMIT OR PLAN APPROVAL RESTRICTION APPLIES TO SEVERAL EMISSION UNITS but not the whole facility, you may divide that usage among the emission units, as you wish for purposes of this inventory. Please note that you have done so in the comment section of the form.

For example,

A facility has three boilers. Normally boilers 1 and 2 operate and boiler 3 is held in standby mode. The three boilers are restricted to burning 40,000 gallons of oil per month based on a 12 month rolling average. For purposes of completing this form, the facility may assume the fuel would be burned in equal amounts in boilers 1 and 2 for determining potential emissions. Alternatively, they may use any other formula to apportion the potential emissions to the different emission units.

Note: Apportioning the maximum allowed emissions among the emission units that share a restriction does NOT place a further restriction on your operating flexibility.

D) A facility may also have additional restrictions that LIMIT FACILITY-WIDE EMISSIONS. Facility-wide potential emission equal the facility-wide limit imposed on the facility.

For example,

- ✓ *If your facility has filed a certification form with the department pursuant to 310 CMR 7.02 (50% or 25% emission cap notification) potential emissions from your facility would equal 50% of the major threshold for the pollutants if your facility holds a 50% certification. Potential emissions would equal 25% of the threshold if your facility holds a 25% certification unless the facility has more stringent*

emission limits under plan approval(s).

RESPONSIBLE OFFICIAL

IF THE FACILITY HAS THIS TYPE OF OWNERSHIP:	THE RESPONSIBLE OFFICIAL MUST BE:
Sole proprietorship	The sole proprietor
Partnership	A general partner with the authority to bind the partnership
Corporation or a non-profit corporation	A corporate official with authority to bind the corporation such as a: ✓ President, ✓ Secretary, ✓ Treasurer, ✓ Vice president of the corporation in charge of a business function, ✓ Any other person who performs similar policymaking or decision-making functions of the corporation.
Municipality or other public agency	A principal executive officer A ranking elected official who is empowered to enter into contracts on behalf of the municipality or public agency.

SEGMENT

The fuel, organic material, or other raw material that is used in an emission unit, and whose use results in the release of air contaminants. The "Side-by-Side" computer printout has a section for each "segment" in each "point".

STACK

The stack or vent through which air contaminants are released to the environment. In SSEIS, each "point" is associated with a stack. Vents are commonly aggregated together as one "stack" in SSEIS.

SUBSTANTIVE COMPLIANCE DATE

The first date by which a facility is required to be in compliance with a MACT emission standard or other substantive regulatory requirements (*i.e., leak detection and repair programs, work practice measures, housekeeping, etc., but NOT a notice requirement).*

VOLATILE ORGANIC COMPOUND (VOC)

VOLATILE ORGANIC COMPOUND is any compound of carbon that participates in atmospheric photochemical reactions. For the purpose of determining compliance, VOC is measured by the applicable reference test methods specified in 40 CFR 60. 310 CMR 7.00: VOLATILE ORGANIC COMPOUND includes all organic compounds EXCEPT the following:

CAS Number	Chemical Name
67641	acetone,
506876	ammonium carbonate,
630080	carbon monoxide,
124389	carbon dioxide,
463796	carbonic acid, N/A metallic carbides or carbonates,
74828	methane,
74840	ethane,
79209	methyl acetate,
71556	methyl chloroform (1,1,1-trichloroethane),
107313	methyl formate
75092	methylene chloride, (dichloromethane),
98566	parachlorobenzotrifluoride (PCBTF),
127184	perchloroethylene (tetrachloroethylene),
75694 CFC-11	(trichlorofluoromethane),
75718 CFC-12	(dichlorodifluoromethane),
75456 CFC-22	(chlorodifluoromethane),
76131 CFC-113	(trichlorotrifluoroethane),
76142 CFC-114	(dichlorotetrafluoroethane),
76153 CFC-115	(chloropentafluoroethane),
75467 FC-23	(trifluoromethane),

593704 HCFC-31 (chlorofluoromethane),
306832 HCFC-123 (2,2-dichloro-1,1,1-trifluoroethane),
354234 HCFC-123a (1,2-dichloro-1,1,2-trifluoroethane),
2837890 HCFC-124 (2-chloro-1,1,1,2-tetrafluoroethane),
1717006 HCFC-141b (1,1-dichloro-1-fluoroethane),
75683 HCFC-142b (1-chloro-1,1-difluoroethane),
1615754 HCFC-151a (1-chloro-1-fluoroethane),
422560 HCFC-225ca (3,3-dichloro-1,1,1,2,2-pentafluoropropane),
507551 HCFC-225cb (1,3-dichloro-1,1,2,2,3-pentafluoropropane),
75105 HFC-32 (difluoromethane),
354336 HFC-125 (pentafluoroethane),
359353 HFC-134 (1,1,2,2-tetrafluoroethane),
811972 HFC-134a (1,1,1,2-tetrafluoroethane),
27987060 HFC-143a (1,1,1-trifluoroethane),
75376 HFC-152a (1,1-difluoroethane),
353366 HFC-161 (ethylfluoride),
690391 HFC-236fa (1,1,1,3,3,3-hexafluoropropane),
679867 HFC-245ca (1,1,2,2,3-pentafluoropropane),

24270664 HFC-245ea (1,1,2,3,3-pentafluoropropane),
431312 HFC-245eb (1,1,1,2,3-pentafluoropropane),
460731 HFC-245fa (1,1,1,3,3-pentafluoropropane),
431630 HFC-236ea (1,1,1,2,3,3-hexafluoropropane),
431890 HFC-227ea (1,1,1,2,3,3,3-heptafluoropropane)
406586 HFC-365mfc (1,1,1,3,3-pentafluorobutane),
138495428 HFC 43-10mee (1,1,1,2,3,4,4,5,5,5-decafluoropentane),
375031 HFE-7000 or n-C3F7OCH3 (1,1,1,2,2,3,3-heptafluoro-3-methoxypropane),
163702076 HFE-7100 or C4F9OCH3 (1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane),
163702087 (CF3)2CFCF2OCH3 (2-(difluoromethoxymethyl)-1,1,1,2,3,3,3- hepta-fluoropropane),
163702054 HFE-7200 or C4F9OC2H5 (1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane),
163702065 (CF3)2CFCF2OC2H5 (2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3- hepta-fluoropropane),
297730939 HFE-7500 or HFE-s702 or T-7145 or L-15381 (3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane)
N/A Cyclic, branched, or linear, completely fluorinated alkanes,
N/A Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations,
N/A Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations,
N/A Cyclic, branched, or linear, completely methylated siloxanes,
N/A Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

The following compound(s) are Volatile Organic Compounds (VOC) for the purpose of all recordkeeping, emission reporting, photochemical modeling, and inventory requirements which apply to VOC and shall be uniquely identified in emission reports but are not VOC for the purposes of VOC emission limitations or VOC content requirements:
540885 -butyl acetate

APPENDIX B: LIST OF ACRONYMS

ACRONYM	DEFINITIONS / EXPLANATIONS / COMMENTS
AP- 42	Reference to manual containing emission factors (http://www.epa.gov/ttn/chief)
APCE	Air Pollution Control Equipment
AQ	Air Quality
AQCR	Air Quality Control Region
BACT	Best Achievable Control Technology
BTU or Btu	British Thermal Unit - a measure of energy
BWP	Bureau of Waste Prevention
BWP AQ – SR	Air Pollution form for Source Registration identifying information
BWP AQ 01	Limited Plan Approval permit application
BWP AQ 02	Non-Major Comprehensive Plan Approval permit application
BWP AQ 03	Major Comprehensive Plan Approval permit application
BWP AQ 09	Restricted Emission Status Plan Approval permit application
BWP AQ AP – 1	Air Pollution form for combustion-related pollution
BWP AQ AP – 2	Air Pollution form for process emissions (non-combustion pollution)
BWP AQ AP – 3	Air Pollution form for incineration
BWP AQ AP – 4	Air Pollution form for storage of organic compounds
BWP AQ CAA- HAPS	CAA List of hazardous air pollutants by chemical name with CAS#
BWP AQ ES	Air Pollution form for typical ozone day.
BWP AQ Form	Air Pollution reporting form or permit/plan approval application
CAA	Clean Air Act
CAS	Chemical Abstract Service
CFC(s)	Chlorofluorocarbons - Class I ODC
CFR	Code of Federal Regulation
CF	Cubic Feet
CMR	Code of Massachusetts Regulations
CO	Carbon Monoxide
CPA	Comprehensive Plan Approval
DEP	Department of Environmental Protection - Massachusetts
DEQE	Department of Environmental Quality Engineering, now MassDEP
EM	Emission Method
ENF	Environmental Notification Form
EPA	Environmental Protection Agency - Federal
EPCRA	Emergency Planning and Community Right-to-Know Act
EU	Emission Unit
FC(s)	Fluorocarbons
FIP	Federal Implementation Plan
FPS	Feet per Second
FR	Federal Register
FT	Feet
FUE	Fuel Utilization Equipment
FUF	Fuel Utilization Facility
HAP	Hazardous Air Pollutants
HCFC	Hydrochlorofluorocarbons - Class II ODS
HLPV	
HOC	Halogenated Organic Compounds
HYC	Hydrocarbons
ID	Identification
LAER	Lowest Achievable Emission Rate
LBS	Pounds
LCON	Code for the Regional Office
LPA	Limited Plan Approval
MACT	Maximum Achievable Control Technology

MADEP	Massachusetts DEP
MMBtu	Million British Thermal Units
MMCF	Million Cubic Feet
MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standards
NESHAPS	National Emission Standard for Hazardous Air Pollutants
NH3	Ammonia
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides - "knocks"
NSPS	New Source performance Standard
ODS	Ozone Depleting Substances
Pb	Chemical abbreviation for Lead
PCBTF	Parachlorobenzotrifluoride
PM	Particulate Matter
PM10	Particulate Matter, 10 microns or smaller
PM2.5	Particulate Matter, 2.5 microns or smaller
PPM	Parts per Million
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RCRA	Resource Conservation and Recovery Act: program that establishes hazardous waste management rules
REC	Recorder
RES	Restricted Emission Status
RVP	Reid Vapor Pressure (for gasoline)
SCC	Source Classification Code
SEG	Segment
SIC	Standard Industrial Classification
SIP	State Implementation Plan -- the federally approved regulations, permits and programs that implement the Federal Clean Air Act in the State.
SNAP	Significant New Alternative Policy
SO2	Sulfur Dioxide – chemical abbreviation
SOX	Sulfur Oxides - "socks"
SR	Source Registration
SSEIS	Stationary Source Emission and Inventory System
TPY	Tons per Year
TSP	Total Suspended Particulates
TURA	Toxics Use Reduction Act
USGS	United States Geological Survey
UTM HOR	Universal Transverse Mercator horizontal coordinate (the northerly coordinate)
UTM VER	Universal Transverse Mercator vertical coordinate (the easterly coordinate)
VMS	Volatile Methyl Siloxanes
VOC(S)	Volatile Organic Compounds
WGT	Weight
YR	Year

APPENDIX C: CALCULATIONS

SECTION C.1: ESTIMATING EMISSIONS

SECTION C.1.1: BASIC METHODOLOGY

Apply the formula below to calculate potential and actual emissions

POTENTIAL EMISSIONS are determined from the following equation:

- ✓ IF your facility does NOT have an operating restriction

  POTENTIAL EMISSIONS = [EMISSION FACTOR] x [MAXIMUM CAPACITY] x [8760 hours of operation per year]

  Note: 8760 hours per year = (365 days per year) x (24 hours per day)

ACTUAL EMISSIONS for ALL facilities are determined by substituting the actual amount of raw material used for the maximum possible hours per year and the maximum capacity as follows:

> ACTUAL EMISSIONS = [APPROPRIATE EMISSION FACTOR] x [ACTUAL RAW MATERIALS USED or ACTUAL HOURS OF OPERATION] x [percent of EMISSIONS NOT CONTROLLED BY AIR POLLUTION CONTROL EQUIPMENT REQUIRED PURSUANT TO A PLAN APPROVAL OR REGULATION]

Example Calculations: Formulas and Example calculations for Process Emissions are provided in Section C.1.2 below. Section C.1.3 has formulas, emission factors, and sample calculations for fuel utilization facilities.

SECTION C.1.2: EXAMPLE CALCULATIONS FOR PROCESS EMISSIONS:

This section is divided into two parts:

- Section C.1.2.1 Example Calculations for Coating Operations Using VOC Coatings
- Section C.1.2.2 Example Calculations for Other Process Emissions.

TABLE C.1.2-1

Wood Products Surface Coating Paint Spray Booth

EMISSION UNIT DESCRIPTION:	MAXIMUM CAPACITY & EQUIPMENT DESIGN: -Spray gun: 3.0 gallons per hour -Paint: The paint with the highest VOC concentration AS APPLIED contains 5.5 pounds of VOC per gallon **NOTE ON "AS APPLIED":** When calculating VOC emissions, you need to include the VOCs in the coating as purchased as well as any solvents you add to thin it. Thus the MSDS may say that the paint had 5 pounds of VOCs per gallon, but the as applied number is 5.5 lbs. per gallon because of added solvents. You also need to include any solvents you used to clean the production equipment. The paint with the highest solids concentration has 3.5 pounds of solids per gallon of paint -90% overspray ACTUAL OPERATIONS: 5678 gallons of paint as applied (paint plus solvent thinner) used
POLLUTANT	EXAMPLE CALCULATIONS
VOC	
POTENTIAL EMISSIONS	[3.0 gallons of paint & thinner applied per hour] x [5.5 pounds of VOC per gallon of applied paint] x [8760 hours per year] x [1 ton / 2000 pounds] = *72.3 tons VOC year* *The emission factor for VOCs = All of the VOCs in the applied paint and solvent thinners become VOC emissions Alternatively you can use the formula: [{(Gallons of paint used AS PURCHASED per hour) X (pounds of VOC per gallon AS PURCHASED)} + {(gallons of paint thinner applied per hour) X (pounds of VOC per gallon of paint thinner)}] x [8760 hours per year] x [1 ton / 2000 pounds] = *tons VOC per year*
ACTUAL EMISSIONS	[5678 gallons of as applied paint used] x [5.5 pounds of VOC per gallon] x [1ton / 2000 lbs.] = *15.6 tons* You can also use the alternative formula: [{Gallons of paint used (as purchased)} x {pounds of VOC per gallon (as purchased)}] + [{gallons of solvent thinner used} x {pounds of VOC per gallon of solvent thinner}]
PARTICULATE (TSP)	
POTENTIAL EMISSIONS	[3.0 gallons of paint (as applied) per hour] x [3.5 pounds of solids per gallon (as applied)] x [0.90 (the weight fraction of the paint that is over sprayed)] x [8760 hours per year] x [1 ton / 2000 pounds] = *41.4 tons* * The emission factor for spray painting equals the amount of solids in the paint as applied multiplied by the weight fraction of the paint that is over sprayed.
ACTUAL EMMISIONS	[5678 gallons of paint used] x [3.5 pounds of solids per gallon] x [0.90 (the weight fraction of the paint that is over sprayed] x [1ton / 2000 lbs.] = *8.9 tons*

Section C.1.2.2: Example Calculations for Other Process Emissions

TABLE C.1.2-3: Formulas For "Other Process Emissions": **Note: You must obtain the applicable emission factors from stack testing, your permit or plan approval for emission units, the applicable regulations, or, if no other information is available, from EPA's AP-42/FIRE Emission Factors** http://www.epa.gov/ttn/chief/efpac/index.html	
POTENTIAL EMISSIONS	[Maximum processing capacity in lbs. per hour] x [Emission Factor (lbs. of contaminant emitted per lb. of raw material processed] x [8760 hours of operation per year] x 1 ton/ 2000 lbs. = tons of contaminant emitted per year.
ACTUAL CONTAMINANT EMISSIONS	[Actual pounds of raw material processed in lbs.] X [Emission factor in lbs. of contaminant per pound of raw material processed] x [1 ton / 2000 lbs. = tons of contaminant emissions

SECTION C.1.3: FORMULAS AND SAMPLE CALCULATIONS FOR FUEL UTILIZATION FACILITIES

This section is divided into three parts:

- Section C.1.3.1: Formulas for Estimating Emissions from Fuel Utilization Facilities using Emission Factors
- Section C.1.3.2: Example Calculations for a Boiler

Section C.1.3.1: Formulas for Estimating Emissions from Fuel Utilization Facilities using Emission Factors

Table C.1.3-1 presents formulas using emissions factors to estimate potential emissions from fuel utilization facilities. There is separate formula for each criteria pollutant, and for when enforceable operating limits exist, and for when they do not exist.

CAUTION ON USING EMISSION FACTORS: There are various sources for emission factors. When calculating potential emissions you MUST use the emission factors developed through stack testing data or if your facility has never been required to conduct a stack test for the emission unit, the emissions limit established as part of your permit or plan approval, emission limits your facility is subject to pursuant to regulations or, if none of the former conditions exist, emission factors from EPA's FIRE Database or AP-42 Emission factors. Note that the FIRE database is mostly based on the AP-42 Sections and is an easier tool for looking up emission factors. For the most up-to-date FIRE emission factors, please see EPA's website at http://www.epa.gov/ttn/chief/efpac/index.html.

TABLE C.1.3-1

Formulas for calculating Potential and Actual Emissions from Fuel Utilization Facilities using Emission Factors

Air Contaminant	Formula for Estimating Emissions
PARTICULATE MATTER, PM10 and PM2.5	
POTENTIAL EMISSIONS	[EMISSION FACTOR (in lbs. of TSP, PM10 or PM2.5 per 1000 gallons of fuel)] x [% S in the fuel*] x [Maximum rated gallons of fuel per hour / 1000 gallons of fuel] x [8760 hours per year] x [1 ton / 2000 lbs.] = Tons of TSP, PM10 or PM2.5 per year **NOTE**: Particulate emissions can also be calculated from the lbs. of particulate generated per million BTU (MMBtu) heat release potential of the fuel. The example calculations in Table C.1.3-3 below use this method. The formula is: [EMISSION FACTOR (in lbs. of TSP, PM10 or PM2.5 per MMBtu)] x [(BTU's per gallon of fuel**) / 1,000,000 BTU's] x [maximum rated or maximum allowable gallons of fuel per hour] x [maximum allowed or 8760 hours of operation per year] x [1 ton / 2000 lbs.] = Tons of TSP, PM10 or PM2.5 per year. *% S in fuel can be found in fuel analysis **BTU's per gallon of fuel can be found in Table C.1.3-2
ACTUAL EMISSIONS	[EMISSION FACTOR (in lbs. of TSP, PM10 or PM2.5 per 1000 gallons of fuel)] x [% S in the fuel*] x [gallons of fuel used during the year / 1000] x [1 ton / 2000 lbs.] = Tons of TSP, PM10 or PM2.5 per year or [EMISSION FACTOR (in lbs. of TSP, PM10 or PM2.5 per MMBtu)] x [(BTU's per gallon of fuel**) / 1,000,000 BTU's] x [gallons of fuel used during the year] x [1 ton / 2000 lbs.] = Tons of TSP, PM10 or PM2.5 per year

TABLE C.1.3-1

Formulas for calculating Potential and Actual Emissions from Fuel Utilization Facilities using Emission Factors

Air Contaminant	Formula for Estimating Emissions
SOx POTENTIAL EMISSIONS	[EMISSION FACTOR for 1000 gallons of fuel] x [% S in the fuel*] x [Maximum rated gallons of fuel per hour / 1000] x [8760 hours per year] x [1 ton / 2000 lbs.] = Tons of SO_X per year **NOTE**: $S0_X$ emissions can also be calculated from the lbs. of sulfur in the fuel per million BTU (MBTU) heat release potential of the fuel. The example calculations in Table C.1.3-3 below use this method. The formula is: [Lbs. S in the fuel per MMBtu] x [2 (the lbs. of $S0_X$ emitted per lb. of Sulfur in the fuel] x [(BTU's per gallon of fuel**) / 1,000,000 BTU's] x [maximum rated or maximum allowable gallons of fuel per hour] x [maximum allowed or 8760 hours of operation per year] x [1 ton / 2000 lbs.] = Tons of SOx per year *% S in fuel can be found in fuel analysis **BTU's per gallon of fuel can be found in Table C.1.3-2
SOx ACTUAL EMISSIONS	EMISSION FACTOR (in lbs. per 1000 gallons of fuel)] x [% S in the fuel] x [gallons of fuel used during the year / 1000] x [1 ton / 2000 lbs.] = Tons of SOX per year Or [EMISSION FACTOR (in lbs. S in the fuel per MMBtu)] x [2 (the lbs. of $S0_X$ emitted per lb. of Sulfur in the fuel] x [(BTU's per gallon of fuel) / 1,000,000 BTU's] x [gallons of fuel used during the year] x [1 ton / 2000 lbs.] = Tons of SO_X per year
NOx, VOC, CO, PB, NH3 POTENTIAL EMISSIONS	[EMISSION FACTOR (in lbs. Per 1000 gallons)] x [Maximum rated gallons of fuel per hour / 1000] x [8760 hours per year] x [1 ton / 2000 lbs.] = Tons of Contaminant per year
ACTUAL EMISSIONS	[EMISSION FACTOR] x [gallons of fuel used during the year / 1000] x [1 ton / 2000 lbs.] = Tons of Contaminant per year

TABLE C.1.3-2 Oil Heat Values			
FUEL TYPE	**SULFUR CONTENT % by weight**	**(S) lbs. per million MMBTU**	**HEAT VALUE BTU per gallon**
NO. 6	1% 2.2% 0.5%	0.55 1.21 0.28	147,000 150,000 142,000
NO. 4 or 5	0.5%	0.28	142,000
NO. 5	1%	0.55	147,000
NO. 1 or 2	0.3%	.17	140,000

TABLE C.1.3-3

Example Calculations For A BOILER

EMISSION UNIT DESCRIPTION:	✓ ✓ Over 3 MMBtu per hour heat input capacity ✓ • Particulate emission factor of 0.15 lb. per MMBtu • 1% Sulfur in fuel • Residual Oil # 6 fuel ✓ 2 boilers each with a maximum capacity of 23 gallons per hour ✓ Maximum possible fuel use: (2 boilers x 23 gallons per hour x 8760 hours per year = 402,960 gallon per year ✓ Residual Oil # 6 therefore 147,000 BTU per gallon heat value (from Table C.1.3-2) ✓ 1% sulfur content therefore 0.55 lbs. of sulfur per million BTU heat release potential (from Table C.1.3-2). ✓ Actual fuel use = 123,456 gallons
POTENTIAL PARTICULATE EMISSIONS	[0.15 lbs. particulate per MMBtu] x [23 gallons of fuel per hour x 2 boilers x 8760 hours per year of fuel] x [147,000 BTU per gallon of fuel / 1,000,0000 BTU] x [1 ton / 2000 lbs.] = *4.4 tons particulates per year*
POTENTIAL PM10 EMISSIONS	[7.18 lbs. PM10 per 1000 gallons of fuel] x [1 (percent S in fuel)] x [23 gallons of fuel per hour x 2 boilers x 8760 hours per year of fuel] x [1 ton / 2000 lbs.] = *1.57 tons PM10 per year*
POTENTIAL SO_X EMISSIONS	[0.55 lbs. S in fuel per MMBtu] x[2 lbs SO_2 per lb S] x [23 gallons of fuel per hour x 2 boilers] x 8760 hours per year] x [147,000 BTU per gallon of fuel / gal] x [1 ton / 2000 lbs.] = *32.6 Tons SO_X per year*
POTENTIAL NO_X EMISSIONS	[55.0 lbs. NO_X per 1000 gallons of fuel] x [23 gallons of fuel per hour x 2 boilers / 1000 gallons of fuel] x [8760 hour per year] x [1 ton / 2000 lbs.) = *11.08 tons NO_X per year*
POTENTIAL VOC EMISSIONS	[1.13lbs. VOC per 1000 gallons of fuel] x [23 gallons of fuel per hour x 2 boilers / 1000 gallons of fuel] x [8760 hours per year] x [1 ton / 2000 lbs.] = *0.23 tons of VOC per year*
POTENTIAL CO EMISSIONS	[5.0 lbs. CO per 1000 gallons of fuel] x [23 gallons of fuel per hour x 2 boilers / 1000 gallons of fuel] x [8760 hours per year] x [1 ton / 2000 lbs.] = *1.01 tons of CO per year*
POTENTIAL LEAD EMISSIONS	[0.0042 lbs. Lead per 1000 gallons of fuel] x [23 gallons of fuel per hour x 2 boilers / 1000 gallons of fuel] x [8760 hours per year] x [1 ton / 2000 lbs.] = *0.000846 tons of Lead per year*

ACTUAL EMISSIONS	To utilize the above calculation in determining ACTUAL emissions, substitute "ACTUAL GALLONS BURNED per year / 1000" for "[gallons per hour x # of boilers / 1000] x [8760 hours per year]"
ACTUAL EMISSIONS PARTICULATE	[0.15 lbs. particulate per MMBtu] x [123,456 gallons of fuel per year] x [147,000 BTU per gallon / 1,000,0000 BTU] x [1 ton / 2000 lbs.] = *1.4 tons particulates per year*

TABLE C.1.3-3 Example Calculations For A BOILER	
EMISSION UNIT DESCRIPTION:	✓ ✓ Over 3 MMBtu per hour heat input capacity ✓ • Particulate emission factor of 0.15 lb. per MMBtu • 1% Sulfur in fuel • Residual Oil # 6 fuel ✓ 2 boilers each with a maximum capacity of 23 gallons per hour ✓ Maximum possible fuel use: (2 boilers x 23 gallons per hour x 8760 hours per year = 402,960 gallon per year ✓ Residual Oil # 6 therefore 147,000 BTU per gallon heat value (from Table C.1.3-2) ✓ 1% sulfur content therefore 0.55 lbs. of sulfur per million BTU heat release potential (from Table C.1.3-2). ✓ Actual fuel use = 123,456 gallons
ACTUAL EMISSIONS PM10	[0.8lbs. PM10 per 1000 gallons of fuel] x [1 (%S in the fuel)] x (123, 456 gallons of fuel used / 1000 gallons of fuel] x (1 ton / 2000 lbs.) = *0.5 tons PM10 per year*
Actual Emissions PM2.5	[4.67lbs PM2.5 per 1000 gallons of fuel] x [1.12 (1%S in the fuel)+.37) x (123,456 gallons of fuel used / 1000 gallons of fuel] x (1 ton/2000 lbs)= *0.43 tons PM2.5 per year*
ACTUAL EMISSIONS SO_X	[0.55 lbs. S per MMBtu x [2 (lbs. of $SO_{X\ per}$ lb. of S in fuel)] x [147,000 BTU per gallon of fuel / 1,000,0000 BTU] x [123,456 gallons of fuel used] x [1 ton / 2000 lbs.] = *10 tons SO_X per year*
ACTUAL EMISSIONS NO_X	[55.0 lbs. NO_X. per 1000 gallons of fuel] x (123, 456 gallons of fuel used / 1000 gallons of fuel] x (1 ton / 2000 lbs.) = *3.4 tons NO_X per year*
ACTUAL EMISSIONS VOC	[1.13 lbs. VOC per 1000 gallons of fuel] x (123, 456 gallons of fuel used / 1000 gallons of fuel] x (1 ton / 2000 lbs.) = *0.1 tons of VOC per year*
ACTUAL EMISSIONS CO	[5.0 lbs. CO per 1000 gallons of fuel] x [123, 456 gallons of fuel used / 1000 gallons of fuel] x (1 ton / 2000 lbs.) = *0.3 tons CO per year*
ACTUAL EMISSIONS LEAD	[0.0042 lbs. LEAD per 1000 gallons of fuel] x [123, 456 gallons of fuel used / 1000 gallons of fuel] x (1 ton / 2000 lbs.) = *0.0003 tons LEAD per year*

SECTION C.2: THE WEIGHT OF THE VOC, HOC, or HYC CONTROLLED

The Weight of the VOC, HOC, or HYC Controlled is the amount of the VOC, HOC or HYC that is destroyed in the treatment unit. It equals:

(WEIGHT of the VOC, HOC, or HYC USED) X (OVERALL [treatment] EFFICIENCY)
[Calculations shown below]

"THE WEIGHT OF THE VOC, HOC, or HYC USED" equals

(POUNDS of HOC, VOC or HYC used in FORMULATION) + (POUNDS of HOC, VOC, or HYC used in SOLVENT THINNER).
[Calculation A below] [Calculation B below]

CALCULATION A: The POUNDS of HOC, VOC, or HYC used in the formulation is calculated as follows:

1) Convert the total annual gallons of the formulation used to pounds:

   (GALLONS of the formulation USED) X (DENSITY of the formulation) = TOTAL POUNDS of formulation USED

2) Determine the pounds of HOC, VOC or HYC used in the formulation:

   (TOTAL POUNDS of formulation USED) X (WEIGHT % of the HOC, VOC, or HYC in the formulation)* = TOTAL POUNDS of HOC, VOC, or HYC used in the formulation

   *[The weight % will equal 1 if the formulation is from organic compounds. The weight % of the HOC, VOC, or HYC can be found on the formulation component MSDSs]

CALCULATION B: The amount of the HOC, VOC or HYC from use of solvent thinners is calculated as follows:

1) Convert the gallons of solvent thinner used to pounds

   (GALLONS of the solvent thinner USED) X (DENSITY of the solvent thinner) = POUNDS of solvent thinner used

2) Determine the pounds of HOC, VOC, or HYC used in solvent thinner

   (POUNDS of solvent thinner USED) X (WEIGHT % of the HOC, VOC, or HYC in the solvent thinner)* = POUNDS of HOC, VOC, or HYC in solvent thinner

   *[The weight % will equal 1 if the solvent thinner is an organic compound. The weight % of the HOC, VOC, or HYC can be found on the MSDS if the solvent thinner is a mixture]

SECTION C.3: DETERMINING UNIVERSAL TRANSVERSE MERCATOR (UTM) COORDINATES

The Universal Transverse Mercator (UTM) Coordinates are an alternative to latitude and longitude for locating a point on earth's surface. They measure the distance in meters north (the vertical UTM coordinate) and east (the horizontal UTM coordinate) of a fixed point of origin located to the southwest. Instructions for determining the UTM coordinates for your facility from a United States Geological Survey (USGS) Topographical Map, in the 7.5 Minute Series follow.

DETERMINING UTM COORDINATES FROM A USGS TOPOGRAPHICAL MAP	
STEP 1	Locate your facility on the USGS Topographical Map, 7.5 Minute Series
STEP 2	Find the perpendicular lines drawn across the map in 1000 meter (1 kilometer) intervals Follow one of them back to the edge of the map. At the edge of the map you will see numbers on most lines. The lines will be numbered in one of two ways. A few lines will be numbered in degrees and minutes as latitude and longitude, *e.g., 42'30".* However, most of the lines will be numbered in the following format: *^{2}74 or ^{46}96.* This number is a measure of thousands of meters from the point of origin for the UTM Coordinates. *For example, the number ^{2}74 at the base of a vertical line means that any facility on that line is located 274,000 meters EAST of the point of origin for the UTM Coordinates. Similarly the number ^{46}96 at the end of a horizontal line means that any facility located on that line is 4,696,000 meters NORTH of the point of origin for the UTM Coordinates.* Figure C.3-1 Shows a corner of a USGS map with numbered UTM coordinate lines **NOTE:** To obtain the UTM number for a line that is not numbered or is numbered with a latitude or longitude measure, find the nearest horizontal line to the South (or the nearest vertical line to the East) that has a UTM number, and add 1 for EACH line between the line you are concerned about and the last numbered line. **NOTE:** Massachusetts falls within two UTM zones, which means there are two different "points of origin" in Massachusetts. As a result, the UTM numbers change dramatically in the towns (such as Rutland and Gardner) running down the middle of the state.
STEP 3	To obtain the Horizontal UTM (the easterly UTM): -Measure the distance in METERS (thousandths of kilometers) from your facility to the *nearest vertical line to the WEST* (the left). (The meters scale is at the bottom of the map) NOTE: The easiest way to measure the distance between your facility and the *nearest vertical line to the west*, is to put one end of a small piece of paper or card (a business card or 3 X 5 file card works well) on your facility, and mark the point on the card that intersects the vertical line. Then bring the paper down to the kilometer scale at the base of the map, and measure the number of kilometers from the edge of the card to the point you marked on it. Finally, multiply the kilometers by 1000 to convert to meters *(e.g., 0.5 km equals 500 meters).* -The Horizontal (easterly) UTM is the sum of the distance in meters from your facility to the nearest vertical line to the WEST and the meters represented by that vertical line. *For example, if the vertical line is labeled ^{2}74, and your facility was 500 meters to*

DETERMINING UTM COORDINATES FROM A USGS TOPOGRAPHICAL MAP	
	the east (right) of it, the Horizontal UTM will equal 274,000 meters + 500 meters or 274,500 meters.
STEP 4	To obtain the Vertical UTM (the northerly UTM): -Measure the distance in METERS from your facility to the *nearest horizontal line to the SOUTH* (down). (The meters scale is at the bottom of the map) NOTE: The easiest way to measure the distance between your facility and the *nearest horizontal line to the south* is to put one end of a small piece of paper or card (a business card or 3 X 5 file card works well) on your facility, and mark the point on the card that intersects the horizontal line. Then bring the paper down to the kilometer scale at the base of the map, and measure the number of kilometers from the edge of the card to the point you marked on it. Finally, multiply the kilometers by 1000 to convert to meters *(e.g., 0.5 km equals 5000 meters).* -The Vertical UTM (the northerly UTM) is the sum of the distance in meters from your facility to the nearest horizontal line to the SOUTH and the meters represented by that horizontal line. *For example, if nearest the horizontal line to the south of your facility is labeled 4696, and your facility is 250 meters to the north of it, the Vertical UTM will equal 4,696,000 meters + 250 meters or 4,696,250 meters.*

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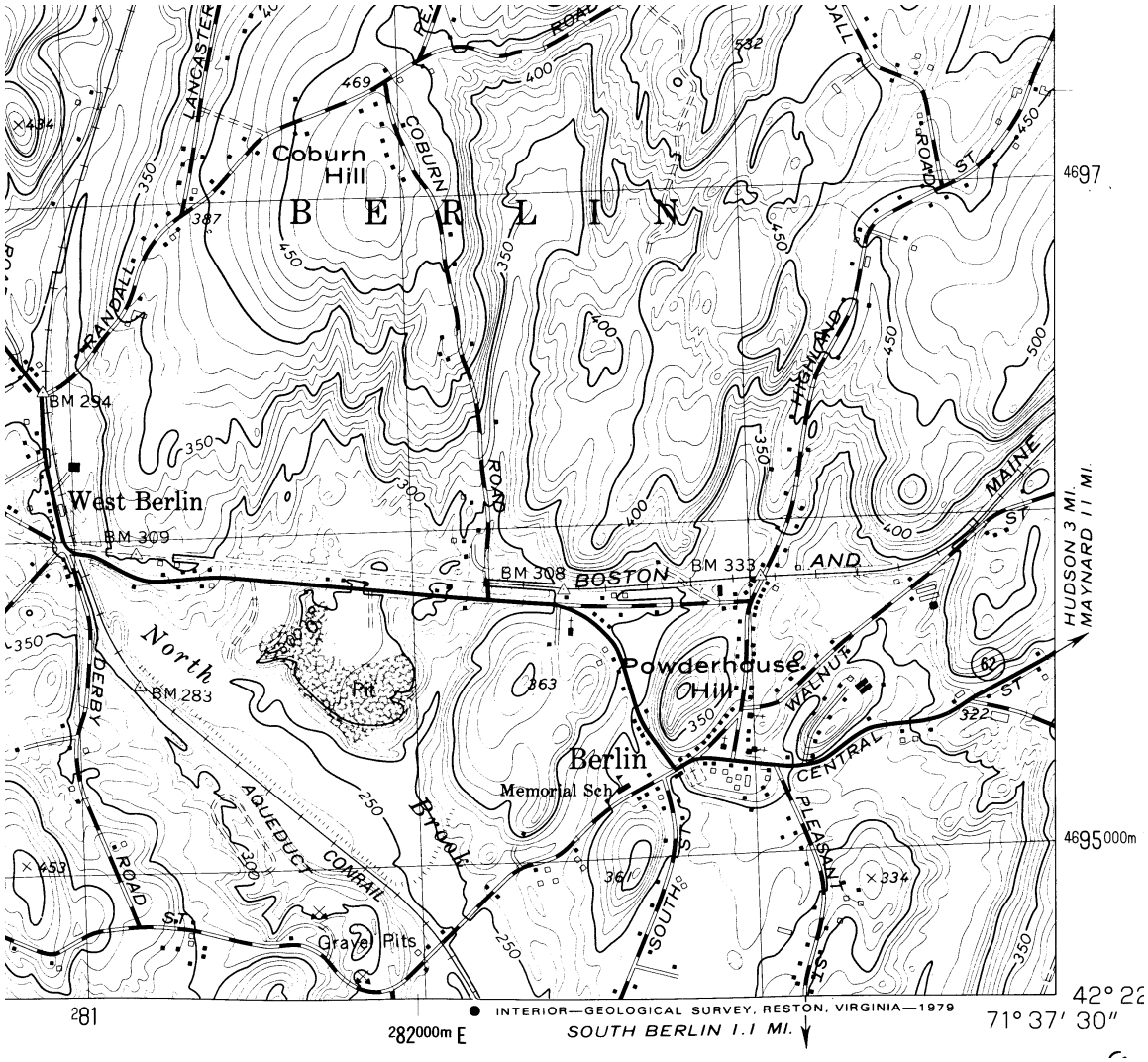
Figure C.3-1
Corner of a USGS Topographical Map Showing Horizontal and Vertical Coordinate Line Numbering



APPENDIX D: AIR POLLUTION CONTROL EQUIPMENT CODES

Control Equipment Identification Codes: Control equipment is used to limit the emission of pollutants to the atmosphere. Numerous types of control equipment may be in place at a facility. For emission statement reporting, your facility is required to report the primary and secondary control equipment. The following list details the different control equipment and their appropriate code.

000-no equipment	051-Tray Type Gas Absorption Column
001-Wet Scrubber high efficiency	052-Spray Tower
002-Wet Scrubber medium efficiency	053-Venturi Scrubber
003-Wet Scrubber low efficiency	054-Process Enclosed
004-Gravity Collector high efficiency	055-Impinger Plate Scrubber
005-Gravity Collector medium efficiency	056-Dynamic Separator (dry)
006-Gravity Collector low efficiency	057-Dynamic Separator (wet)
007-Centrifugal Collector high efficiency	058-Mat or Panel filter
008-Centrifugal Collector medium efficiency	059-Metal Fabric filter screen
009-Centrifugal Collector low efficiency	060-Process Gas Recovery
010-Electrostatic Precipitator high efficiency	061-Dust Suppress water spray
011-Electrostatic Precipitator medium efficiency	062-Dust Suppress wet agents
012-Electrostatic Precipitator low efficiency	063-Gravel Bed Filter
013-Gas Scrubber general	064-Annular Ring filter
014-Mist Eliminator high velocity	065-Catalytic Reduction
015-Mist Eliminator low velocity	066-Molecular sieve
016-Fabric Filter high temperature	067-Wet Lime Slurry scrubbing
017-Fabric Filter medium temperature	068-Alkaline Fly Ash scrubbing
018-Fabric Filter low temperature	069-Sodium Carbonate scrubbing
019-Catalytic Afterburner	070-Sodium Alkali scrubbing
020-Catalytic Afterburner heat exchange	071-Fluid Bed Dry scrubber
021-Direct Flame Afterburner	072-Tube and Shell Condenser
022-Direct Flame Afterburner heat exchange	073-Refrigerated Condenser
023-Flaring	074-Barometric Condenser
024-Modified Furnace burner design	075-Single Cyclone
025-Staged Combustion	076-Multiple Cyclone w/o fly ash reinjection
026-Flue gas Recalculation	077-Multiple Cyclone w/ fly ash reinjection
027-Reduce Combustion air preheat	078-Baffle
028-Steam or Water Injection	079-Dry Electrostatic Granular Filter
029-Low Excess air firing	080-Chemical Oxidation
030-Fuel low nitrogen content	081-Chemical Reduction
031-Air Injection	082-Ozonation
032-Ammonia Injection	083-Chemical Neutralization
033-Control of percent Oxygen in Combustible Air	084-Activated Clay Adsorption
034-Wellord/sodium sulfur scrubber	085-Wet Cyclonic Separator
035-Magnesium Oxide Scrubbing	086-Water Curtain
036-Dual Alkali Scrubbing	087-Nitrogen Blanket
037-Citrate Process Scrubbing	088-Conservation vent
038-Ammonia Scrubbing	089-Bottom Filling
039-Catalytic oxide flue gas desulfur	090-Conversion to Variable Vapor Space Tank
040-Alkalized Alumina	091-Conversion to Floating Roof Tank
041-Dry Limestone injection	092-Conversion to Pressurized tank
042-Wet Limestone injection	093-Submerged Filling
043-Sulfur Acid contact process	094-Underground Tank
044-Sulfur Acid dbl cnt process	095-White paint
045-Sulfur Plant	096-Vapor Lock Balance Recovery System
046-Process Change	097-Secondary Seal for External Floating Roof Tank
047-Vapor Recovery system	098-Moving Bed Dry Scrubber
048-Activated Carbon Adsorption	099-Miscellaneous Control Devices
049-Liquid Filtration System	101-High Efficiency Particulate Air Filter
050-Packed Gas Adsorption Column	

APPENDIX E: EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Information concerning the National Emission Standards for Hazardous Air Pollutants (NESHAPs) can be found on the USEPAs Technology Transfer Network – Air Toxics Website Rules and Implementation webpage at :

http://www.epa.gov/ttn/atw/eparules.html

Not only does this webpage have a link to the Emission Standards for Hazardous Pollutant webpage (discussed below), it also contains links to various webpages that discusses Rule Information (such as Residual Risk/Technology Rules, Area Source Standards, New Source Performance Standards (NSPS), Solid Waste Rules, and other portions of the CAA), Implementation Information (PTE, the Consolidated Air Rule (CAR), and Compliance Assurance Monitoring (CAM)), Urban Air Toxics Strategy, and the CAA Air Toxic Requirements.

The Emission Standards for Hazardous Pollutant webpage is located at the following URL :

http://www.epa.gov/ttn/atw/mactfnlalph.html.

This page list the NESHAP or MACT standard, by source category, providing the applicable rule subpart, the date and citation the rule was published in the CFR, the compliance date, and the EPA Project Lead and Compliance Lead contact information. In addition, on this page, there is a link to the actual rule page which provides information on the proposed rule, comments to the proposed rule, amendments to the proposed rule, the final rule, background information documents (BIDs) pertaining to the rule, and Technical Fact Sheets pertaining to the rule.

APPENDIX F: MassDEP REGIONAL OFFICES –

DEP Regional Facility Master File (FMF) Contacts

Information on MassDEP programs, permits, applications, forms and fees can be found on our website at http://www.mass.gov/dep/.

For specific information about your Annual Compliance Fee invoices and payments, please e-mail us at dep.compliance-fees@state.ma.us or call our ***Helpline at 1-888-846-4067.***

If you have questions regarding your facility permit status or other regulatory requirements at your facility, contact your regional office. You can determine your region, regional contact information, location and other useful information at http://mass.gov/dep/about/regional.htm.